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HARVARD MEDICAL ALUMNI BULLETIN



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LETTERS

Long Island Hospital

1920-1951

To the Editor:

I was delighted to read the letter submitted by Dr. Albert S. Hyman, '18, in your July issue, referring to the Long Island Hospital in Boston Harbor. I was Superintendent and Medical Director of the Hospital from April, 1940 to February, 1951. What happened to Long Island Hospital between Dr. Hyman's glowing reports of 1920 and the uphill struggle of the 1950's (as indicated in the original article) is of great significance. A record of the intervening period should be made known.

Following Dr. Donlan's excellent administration, Long Island Hospital faced two unfortunate changes in 1920: the abolition of a Board of Trustees in favor of a politically appointed Commissioner, and the replacement of a medical administrator by a lay superintendent. Medical interest sharply declined, general morale waned and stigma of disfavor grew to serious proportions. In addition, people were becoming used to fast travel in automobiles and planes and, whereas, they formerly had been willing to make the trip to Long Island by boat, they no longer wanted to now. This contributed a great deal to general apathy on the part of relatives, friends, taxpayers and responsible office holders.

During the thirties, stringent economies, effected despite a realistic demand for budgetary requirements, added to already existing difficulties. My first visit to Long Island on April 18, 1940, by police boat on a dismal, cold, penetrating, rainy day, was most discouraging. At the insistence of the late Mayor Tobin, I felt that I had no choice but to accept the challenge to head the Hospital as administrator.

The institution lay in a most disreputable state of repair; morale of the patients and personnel had dropped to an "abysmal low": the then existing, self-perpetuated Medical Staff found itself reluctant to visit the patients. Long Island Hospital, to the average person, had become synonymous with neglect and

During my eleven years of administration I attempted to form a longrange plan for the future of this haven for the crippled, the aged, and the derelict; and I received from Mayors Tobin, Kerrigan, Curley and Hynes complete support to all my recommendations. As a result, the Hospital became reorganized: gained accreditation by the American College of Surgeons and later by the Joint Commission on Accreditation of Hospitals.

The war years, 1941 to 1945, were tense, disturbing and disheartening. Permanent blackouts, critical nurse and personnel shortages, few and below-average older doctors, fear of the huge ammunition depot at neighboring Fort Strong, and surrounding military installations on nearby islands — all these factors bore close to a breaking point.

In 1946, James Curley was running for mayor of Boston. He announced as one of his campaign promises a plan to do away with Long Island Hospital and to build a new hospital on the mainland. After he took office, he held a meeting. I was the only member at this meeting to oppose his

plan.

I explained my reasons to him. The natural beauty of the location, I felt, was unsurpassed and was a great factor in the morale and rehabilitation of patients who could be taken out of doors in good weather. This would be impossible in a city location. Finally, the cost alone of buying land in Boston to build a new hospital would surpass the cost of building a bridge from the Quincy shore to Long Island.

These and other arguments completely convinced him, and he proceeded to provide the necessary appropriations to revamp and modernize the Hospital's wards and physical

plant.

It is impossible to describe the change from the rainy day in 1940 when I first visited the Hospital. The cemetery for countless numbers of unclaimed dead was landscaped, beautified and made reverent.

A Medical Advisory Board of leading Boston physicians and a consultant staff of prominent doctors representing major Boston hospitals were

organized.

A Constitution and By-Laws for the Medical Staff were prepared and accepted by the Staff in accordance with requirements of the American



Long Island Hospital

College of Surgeons. Morale of personnel and patients reached a high level due to changes in philosophy of management. An accredited school for practical nurses was established.

Finally, construction of the Long Island Bridge was completed. This plan had met with strong opposition when I first proposed it in 1940 and it was only after ten years of determined effort to effect better communication with the mainland that construction was finally realized in 1951. It won immediate and universal ap-

proval.

Some aspects of my plans have not yet been realized. One important feature was to develop a relationship with Boston City Hospital for affiliation of our school for practical nurses; another was to effect a reciprocal rotation of residents between the Long Island Hospital and the Boston City Hospital. In order to do this, the facilities of the Hospital must be made known to taxpayers, professional men, and men in political capacity.

I am grateful to Mr. Hugh J. Campbell and G. Frank McDonald, Commissioners under whom I served, for their unflinching and trusted support of all my recommendations. Dr. John Cass, Jr., who worked with me in close harmony and sympathy, has done a splendid job since 1951, despite limitations resulting from a change in philosophy relative to the purpose and value of the Hospital: The emphasis on rehabilitation for the alcoholic has for the present made the geriatric and the chronic aspects of the program less active.

Long Island Hospital has great potential worth for the care and study

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HARVARD MEDICAL ALUMNI BULLETIN

VOL. 35

OCTOBER 1960

NO. 1

Cover: Holden Chapel, flanked by Hollis and Stoughton Halls, stands in Harvard Yard, Cambridge. From the inception of the Medical School in 1783, until its removal to Boston in 1810, Holden Chapel was the main building for medical lectures and laboratory work. Here, in 1788, the Frenchman Pierre de Sales La Terrière began the year of medical studies described on page 20 of this issue. Photo, courtesy of the Harvard News Office.

Southern Exposure	7		
Along the Perimeter	8		
Anatomy	12		
Diagnosis Deferred: De Serpentibus et Arte	18		
Harvard Medical School in 1788-89: Mémoires de Pierre de Sales La Terrière et de ses traverses	20		
Editorial: Classica Rediviva			
Pet-Pourri			
Beethoven's Deafness	30		
Medicine in the Soviet Zone of Germany	34		
New Biochemistry Head	38		
Honors	38		
Regional Activities	38		
Book Review	39		
James McLaren Martin	44		
William Lennox	46		
Obituaries	52		
Advertising: Milton C. Paige, Jr., 8 Fenway			

October, 1960

Boston 15, Mass., CO 6-7510

LETTERS

of chronic and geriatric diseases and its location and natural beauty are unsurpassed. May it return to its greatness of the days of Doctors Donlan, Cabot, Cushing, Bradford, Cotton, Kimpton, Sears, Magrath and Lahey. May Harvard Medical School grasp this valuable source of clinical material and gain from what it has to

> JAMES V. SACCHETTI, '27 Assistant Superintendent Boston City Hospital

Luck's Against Us

We were pleased at the response to our query regarding the translation of the "Latin" inscription on the shoulder patch of the Fifth General Hospital in World War II (Harvard Unit).

From the many letters received, we were gratified to learn that many of our Alumni really do read the Bulletin. Those who submitted solutions may be divided into two groups; the poorer Classicists merely pronounced the word according to the spelling and at once got the answer. The second group for a few brief moments endeavored to make out of the letters a Latin word or phrase. But, as the accompanying letters will show, they proceeded with their tongue in their cheek to provide what they considered to be a proper answer.

An editorial, printed elsewhere in this number, urges that college students return to the study of classical languages. These letters may herald the Renaissance of the Classics. Who can foresee the effects of this contest on the admission requirements at Har-

vard Medical School?

-T.H.L.

Jonnar Bruks, M.D. Edit tore, Harr vud Medic alal umni bul le tin, XXV Sha tuck street, Boss ton, mass

Lux Egenst Us

Phi on you edit tore, Who knoweth latin, knoweth greek, But never with a chance to speak; Who knoweth not Phoenician word, Or, if he knoweth, never heard. Lux egenst im!

Sin cere li urs,

PAULUM MED OWES, '51

To the Editor:

. . . I am sending the following from my consultant, Dr. Arthur Young, Head — Department of Classics, University of Pittsburgh.

"I observed that luxegenstus is only one word, from the star at the bottom. There is no latin word like this and lux is feminine and would not agree with a masculine ending (us).

"Luxegenstus — Luck's against us!"

Josiah R. Eisaman, '21

To the Editor:

Your "Mystery Latin" is, of course, of a piece with the slogan, "Illegitimum non carborundum" and the like ... "Luck's against us."

CARL H. HARTWIG, '32

To the Editor:

Just in case you're serious, it was obviously written by a severely paranoid member of the unit and means "Luck's against us."

Luxelusiv but not egenstus.

ELLIOTT S. ROBINSON, JR., '47

To the Editor:

Confess all! Didn't you really want to know whether your magazine was read or not?

PHILIP BATCHELDER, '23

To the Editor:

Try this one:

Oh Sibile, si ergo Fortibus es In ero O Nobile, themis trux Sivat sinem, cousan dux

F. E. YATES, M.D.

To the Editor:

Prof. Herbert Howe of the Classics Dept. here . . . solved it in about 40 seconds.

Prof. Howe is a Harvard man but not an M.D. What is his reward?

HUGH PAYNE GREELEY, '09

Ed: Four fun-packed issues.

To the Editor:

The seal is a handsome one known to those of us in the trade as a "luxury item," or a "veritasty number." Yale, incidentally, has "Lux" in its seal only because the electricity is included in the price of the room — no extra billing as at Harvard.

Since I am already receiving the HMS Alumni Bulletin free, may I substitute a year's subscription to the



Luxelusiv but not egenstus (List of winners on page 50)

monthly newssheet of the Eclectic Medical College?

JOHN C. NEMIAH, '43B

To the Editor, Dr. John R. Brooks:

Brux iam in genera labit de saponte deniu, fores notricat alto decodit pro vi dat lux nota gensti utu. Alma bestio,

JOHN A. WILLIAMS, '46

To the Editor:

The challenge which you placed before the Alumni, that of solving the meaning of the word or words surrounding the symbolic G. I., intrigued me. I set the letters down in their given sequence, and I noted that they constituted three Latin words: LUX EGENS TUS. These words have the following meanings:

Lux, noun, meaning light; in a broader sense, life, the world. Egens, adjective and present participle of egeo, meaning needy, needing, being destitute of. Tus, noun, meaning frankincense.

Frankincense, perhaps, needs a bit of elaboration. It was employed during various periods of antiquity as a fumigation agent, as an embalming agent, and as a perfume. It was used, too, extensively in carrying out religious rituals.

So keeping the above explanatory remarks in mind, up comes this translation:

> O the world! It is needing (it is destitute of) frankincense! (for fumigation purposes or for spiritual purposes).

Freely rendered it might come up: O the troubled world! How needful it is! Large supplies of frankincense are needed!

Quite a proper plea for the period in which this patch was devised.

With a satisfied air of mental and physical tranquillity I lay back relaxed, adjusted myself to the acceptance of my reward. But this state of self-glorification was distressingly brief, for suddenly it occurred to me that "egeo" and its derivatives govern the genitive case, and therefore, "tus" should be "turis" if the above translation were to apply. Hurriedly, I revised my rendering, and thought of the three words as being in the vocative case. And here it is now with some poetic freedom:

O the world (life, light)! O (its) the need! O frankincense (is the

crying need)!

If this is not the intended meaning of the designer, I am inclined to think that it was his true thought surrealistically subconsciously expressed by these letters.

The world could do with a bit of frankincense today, too, don't you think?

HAROLD K. MARSHALL, '04

To the Editor:

The clever use of the so-called Latin reminds me of the engraved stone said to have been unearthed in Northern Italy and which bore the inscription:

> TOTI EMUL ESTO

It is alleged that the scholars were quite stumped, but that it was quickly solved by a little urchin who just happened along.

GALE E. WILSON, '30

Ed: How?

To the Editor:

I am proud to present the only correct solution to your "shoulder patch" problem in the July issue. At first glance the phrase "LUX EGENSTUS" seemed to be a late or porcine Latin translation of the early Etruscan expression, "Fortuna nobis adversa" which, freely translated into the vernacular, means, "I guess we're just a bunch of schlemiehls." Certain features, however, suggest a hidden meaning which required a Cabalistic interpretation.

According to accepted occult principles the letters must be combined. In the first row we place the word LUX. Above it we place the first three letters of the Harvard Seal, to

give the arrangement

VER LUX

Combining the letters vertically we get the following significant results: The first pair, VL, represents in Roman Numerals, the number 45; EU, obviously is the Greek eu, meaning well or good; and RX, of course, means prescription. The first part, therefore, means, "Forty-five good prescriptions".

So far so good. Then placing the remaining letters in similar rows we

have

<u>ITAS</u> EGENSTUS

I have underlined certain letters which, by the principle of reciprocal and reverse cross-fertilization, will yield in the F₁ generation, the word SATIS, meaning enough, sufficient, or, even preferable, adequate. The message therefore reads: "Forty-five good prescriptions (are) adequate..." for what? I could hardly contain myself but stayed up all night to decipher the remainder.

After SATIS has been taken away, there remain the letters, EGENSTU. Now, by the newly discovered enzyme, vowel-transmutase, (a principle, incidentally quite unknown to Paracelsus), we transform the first word from EGENSTU to UGENSTE. This suggests the Choctaw variant of the English word against, with one

letter E left over.

Now, in addition to this E, there are the further letters V G H. These you claim stand for "Fifth General Hospital", but they must have an inner significance quite divorced from their manifest content. These letters, combined with residual E, caused much trouble. At first I tried the psychoanalytic principle of subliminal ego-transfer, but this did not, apparently, operate on Wednesdays. Finally, by a Scanzoni maneuver, I arrived at the arrangement E V H G. When these were appropriately plotted on the x-ray diffraction pattern of the alphabet, they indicated the key word, everything.

The Cabalistic meaning of the arm patch is, therefore, "Forty-five good prescriptions are adequate against everything." This was indeed good army doctrine when I was in the service. The only trouble was that, at HMS back in the medieval period, I never learned even four prescriptions, let alone forty-five. But I suppose the HMS has changed, as has the army.

Please don't forget to send me the prize.

LESTER S. KING, '32

To the Editor:

The word surrounding the symbolic G.I. is the cryptographic rendition of the Latin phrase:

Contra nos fortuna

To anyone acquainted with the military mind there is little mystery involved. The Heraldic Division of the Quartermaster Corps has an unwritten regulation that no design for a seal or crest of any unit may be approved without modification. In turning down the sketches as originally presented, they quoted a WD Circular of 1898 requiring that all insignia be coded, not only to prevent identification by the enemy, but that the insig-nia may be useful as a diversionary tactic to keep the enemy personnel busy trying to decipher its meaning. At that time, it must be remembered, conversion hysteria was rife in both military and medical circles. Hence as a compromise the original Latin phrase of "contra nos fortuna" was translated into English and converted back to Latin phonetically. This proved too complex for the Q.M.C. and too simple for our own cryptographers to decipher, so that everyone was happily baffled.

ARTHUR G. KING, '30

To the Editor:

Influenced by the tropical noonday sun, and tantalized by the thought that something for free might be even freer, I submit the following re the July 1960 issue.

LUX E GENSTUS PUROL DUI BUTA CLODIS SADER IN INFANTRI

> Guy S. Hayes, '39 Cali, Colombia

Medical Life in Romania

To the Editor:

By chance I have had the opportunity to read the article "The Romanian Medical Scene" by Stefan and Ileana Issarescu, which appeared in your April 1960 issue.

I thought that perhaps your readers would be interested in learning some recent aspects of medical life in Ro-

mania.

LETTERS

Since I live in Romania, I wish to remain anonymous for reasons which surely you understand perfectly.

Your article mentions three medical schools. There exist actually in Romania at present 5 faculties of medicine, one at Bucharest, one at Cluj, one at Iassey, one at Timisoara, and one at Targul Mures (for the Hungarian minority of Transylvania).

In the first three years the Romanian medical student reserves 15 percent of course hours and practical work for the study of Marxist doctrines. Military service and physical education also take up 10 percent of course hours and practical work, thus bringing to approximately 25 percent the time for course hours and practical work reserved for purposes which have no connection with medicine.

At the end of his studies, the student must take the state exam, given orally, and which is an eliminating exam, a compulsory part of which is the Marxist doctrine.

According to the law, 85 percent of the students who are admitted into the first year, in all university sections, must be children of workers or of poor peasants. Only 15 percent of admissions are for children of intellectuals and civil servants. Since doctors who have engaged in private practice are also considered as "bourgeois," their children are not admitted into the various faculties. Most Jewish children are not admitted either.

Through excessive devotion, and in order to be better appreciated by their superiors, the directors of the faculties admit up to even 95 percent the children of peasants and workers. At Bucharest's Faculty of Medicine, where there are in all only 300 places in the first year, there are only 15 to 20 places left for the children of intellectuals who take the exam.

Furthermore, the exam is purely formal, for the exam commission establishes in advance the list of candidates who are to pass, with indifference to their professional level. Thus, some candidates with very low marks in the written exam obtain "miraculously" the necessary average for entering the faculty, while others, with good marks in the written exam (which is secret, the candidate's name not being known) do not obtain the necessary average, even if they have an-

swered well the questions asked of them.

The same political criteria are used in all subsequent exams: the "externat," the "internat," the "médecin secondaire," the "médecin spécialiste," and the "médecin primaire," as well as in the recruiting of teaching personnel in the faculties and in scientific institutions.

For more security, a general revision of all these people takes place each fall, and those who are considered as "unfit," are eliminated, a fact which always provokes disturbances in teaching and in scientific research work.

Very rare indeed are the talented doctors, characteristic of the Romanian genius, who are still able to work in the universities and scientific research institutes. Often their works appear in conjunction with persons who don't even know what's going on.

Often the ultra-modern installations of a laboratory remain unused, for nobody is qualified to use them. Furthermore, the continual changing of scientific personnel shackles research work which is begun by one and continued or abandoned by another.

In spite of these great difficulties, the true men of science succeed from time to time in producing works which do them honor.

One must also realize that scientific documentation is not free. All medical books and reviews from Russia or other Communist countries can be found in the bookstores. On the other hand, American, English, and French books are concentrated in the library of the Medical Documentation Center of the Health Department, where a special pass is required for entry. These books are also sent occasionally to the libraries of the large hospitals — but one does not very easily obtain permission to take them home for a few days.

In spite of that, these books, as well as medical reviews from Western countries, are the most sought after.

Romania finds itself in the strange position today of having to pay the price for socialism without reaping its benefits. The price paid is the complete abolition of private practice and private choice of physician. Far from offering free medical aid to all in return, however, a good portion of the populace must pay for examinations and hospital care, just as in a Capitalist country. Those who cannot pay go without treatment. Even civil servants and Kolkhoz workers, the darlings of the Regime who re-

ceive free care, must pay for medicines at the outpatient clinics.

In order to prevent doctors from secretly obtaining a private practice, this crime is punished as "spéculation economique" (economic speculation), with prison terms varying from 3 to 10 years. Recently a doctor has been condemned to 5 years in prison because they discovered in his vegetable bag, under the potatoes, a sphygmomanometer and a syringe.

Likewise, the esteemed surgeon and university professor, Dr. Kuti Tuvara, has been condemned to 12 years in prison, along with his wife and his parents, because of an event which took place 12 years previously. These condemnations have provoked such a revolt among the doctors, the old academicians, and the university professors, that the government has been obliged to pardon them all.

But other doctors, less known, continue to serve heavy prison terms for so-called crimes which would not be considered as such in a democratic country.

As a result of enforcing with rigor the laws of sanitation, the majority of children are now born in maternity hospitals in the cities or in the communes (which group together several villages), and thus the infant mortality rate has dropped, especially in the country. In the same manner, the anti-epidemic sanitation laws are strictly enforced (2 years of prison for contamination or for having hidden or concealed an infectious disease). The number of cases of exanthematous typhus, typhoid fever, tuberculosis syphilis, and dropped considerably, and cases of swamp fever and pellagra have become much rarer. Anti-polio vaccination has also begun to lower the number of cases of this disease.

On the other hand, in Romania the number of cases of epidemic hepatitis with deadly cirrhosis forms is constantly increasing. For three years, there has been functioning in Bucharest a hospital of 500 beds used exclusively for this disease. The two last epidemics of the grippe have taken a heavy toll, since proper nourishment and the hygienic state of a part of the population continues to be unsatisfactory (especially in the villages).

Such are actually the conditions, difficult and sometimes tragic, in which Romanian doctors practice their noble profession for the well-being of their people.

A ROMANIAN DOCTOR

Southern Exposure

Guy Owens '50



"Capt'n, I'm a Harvard Man too!"

Serving as a house officer in a Southern Veterans Administration hospital shortly after graduation from Harvard Medical School, I found my colleagues little impressed with my openly proclaimed satisfaction for my school.

One such occasion centered about a somewhat less than scholarly elderly gentleman patient. One fine day, he had begun to drink and, for some strange reason, a railroad track served as his stool. The day progressed and he became so attached to his roost that only the force of a locomotive could unseat him.

And so it did. He was badly shaken and bruised, but his only serious injury was a depressed fracture of the left temporal bone in the region of Broca's speech center. He was brought to the hospital profoundly aphasic.

Repair of the skull defect was easily accomplished, and, for a time, he became a happy, contented, always-vocal though unintelligible occupant of the neurosurgical ward. On rounds, his attempted greetings were profuse and always garbled. Despite, or maybe because of his neurologic deficit he was a master comedian.

It was at this point that our friend fell under the evil influence of two of my colleagues, villains of the darkest sort. They managed to acquire a copy of the *Harvard Medical Alumni Bul*letin and for weeks they worked with our aphasic comic in the development of a very specialized vocabulary.

One morning, much like any other, rounds were in progress. As we approached the bedside of our aphasic patient, the two conspirators appeared very confident and self-satisfied. The banter about my medical origin was becoming particularly caustic, as indeed it had been for some days past. Suddenly, at a signal unseen by me, that gentleman reached beneath his pillow, flashed the copy of the *Bulletin* in my face and roared out, "Capt'n, I'm a Harvard Man Too!" The words

were clear and sharp. Almost immediately, the ward was filled with glee, and my medical colleagues, looking immensely pleased, basked in the full glory of their rehabilitative triumph.

For weeks thereafter, the fine old gentleman each day, in the same persevering fashion, let me know that he too was from "that place." Ultimately the whole story came out, and should any similarly self-satisfied gentleman from HMS ever come this way, let him beware for there may be other "Harvard Men Too."

". . . he became so attached to his roost that only . . . a locomotive could unseat him."



Along the Perimeter





Dr. Berry shows King Bhumibol and Queen Sirikit of Thailand a model of the future Harvard Medical School area. At extreme right is King Mahidol, the present King's father, who graduated from H.M.S. in 1928. He died in 1929.

Sirikit and the King of Siam

Harvard was wounded when the Boston papers failed to notice the visit of King Bhumibol Adulyadej to Harvard Medical School on his tour of Boston last July. The *Bulletin* feels, yes insists, that some mention be made of the cavalcade of Cadillacs and retinue of 50 Thais who, led by their King and Queen, pulled up for a brief stop at 25 Shattuck Street. Born 32 years ago at the Mt. Auburn Hospital when his father was a student at Harvard Medical School, the young King of Thailand included the Medical School as one of the stops on his itinerary.

Walking up the steps of Building A, the couple lived up to the imaginative concept of modern Oriental royalty. It was obvious why Queen Sirikit, dressed in a suit of Siamese silk designed by Balmain of Paris, is said to be "one of the world's most beautiful women and certainly its most beautiful queen."

Our welcome was most informal but the King seemed touched to meet his former pediatrician, Richard M. Smith, '07, and to read a letter from his father written to Miss Murphy on the same day (July 7) 32 years ago. He received from Dean Berry an engraving of the School

from which his father, a member of Phi Beta Kappa, graduated with honors in 1928.

Better news coverage was accorded the visit to the Mt. Auburn Hospital where, in the room he was born, the King was allowed to read his chart: "a nice baby," he read and added, "and I hope I have grown into something nice." At the Hospital reception one woman, born on the same day as the King in the Mt. Auburn Hospital, was overwhelmed: "I was so nervous, I didn't know what to say to him. I think I said, 'It's an honor to meet you, Your Highness.' The King said, 'It is a distinction' — at least I think he did."

Educated in law himself, King Bhumibol is one of the best informed heads of state. In the field of public health he is particularly recognized for his role in controlling a cholera epidemic in his country in 1959. While he was here, the King paid a visit to the School of Public Health's new International House opposite the entrance to Louis Pasteur Avenue on Park Drive.

After a day in the Hub, meeting Dr. W. Stewart Whittemore who delivered him, and touring his father's

Alma Mater, the only king ever born in the U.S. had a special feeling for Boston. "Boston has much to do with me. I was born here. My mother and father studied here. But apart from these things, Boston represents much more. It has been the birthplace of your country and the spirit of freedom is very strong here."

From the Columbian Centinel, Feb. 13, 1811:

Doct. COATS

HAS returned to No. 17, Court-Street, Boston, and would be happy to wait on those afflicted with the maladey called CANCER.



Dorothy in Wonderland

I was proofreading copy of the new Harvard Medical Alumni Directory one afternoon, when I began to nod. "These endless names are so tedious; none of the really GOOD people are here," I thought impatiently, "no Saltonstalls, no Lodges!" But suddenly I found, in quick succession, a CABOT, a LOWELL, a MURPHY, a MARC ANTHONY, and a MYLES STANDISH. I was overjoyed to think our pedigree was assured and I hurried down to Vanderbilt to post a notice of the fact. As I crossed the Foyer I noticed some sort of celebration on the TENNIS courts. Just then, a WHITE HARE hurried past me muttering, "What next! First women in Vanderbilt, now EARLS, LORDS, and KNIGHTS! Oh my ears and whiskers!" As I sauntered along I found myself entering the GOLDEN GATES of a HIGH-TOWER atop which GARLANDS and FLAGGS were waving. It was EARLY EASTERDAY morn, I followed the FIFE and DRUM corps into the MARBLE HALLS where I soon was mingling with ROYALTEY, KINGS and QUEENS arrayed in SATIN and wearing RINGS, DIAMONDS and PEARLS.

Fascinated, I GALLUPed through the FIELDS, HILLS, and PARKS to admire the beauties of nature. There were GROVES of lush GREEN TREES around a POND beside which were FLOWERS of GOLD and WHITE lying across a KLUMPP of exposed BROWN ROOTS. While stopping by the side of the BLACK WATERS for a SHORT time I picked some BERRYS which were growing among the WEEDS. They were so SWEET I looked for other fruits and found a BUSH bearing what looked like LEMONS and PLUMS and off in the distance BRANCHES of APPLES were swaying in the BREEZE. How wonderful this LITTLE world was, so much to explore. I was FARR down in PITTS

and CAVES one minute then climbing over CLIFFS, ROCKS, STONES, IRON and STEELE the next. Everything was different, it seemed, as I strolled along a LANE beside rambling BROOKS which led to an old GRAY CHURCH. Entering I found an ALTER flanked by statues of ANGELLS and POPES. It seemed like the SABBATH and I knelt in the SANCTUARY and rang the BELLS on the steps. Overhead BIRDS, CROWES, DOVES, and ROBBINS were flying. I opened the DORR to the graveyard and saw PARTRIDGES and PEACOCKS majestically strutting among the GRAVES and COFFINS. What a sight! In the MEADOWS a FINE YOUNG LADD aROSE to SINGH a LOVE song. The weather was that of late SUMMER or early FAHL and the WIND was blowing the SEEDS through the air. As I started toward the WOODS, to my surprise, I found a STREET and some RHOADS winding around a LAKE where BEAVERS, FISH, DRAKES, POL-LOCK, PIPERS, ROACHES, SWANS, and TURTLES were happily basking on the SHORES. Following these paths I came to a beautiful CASTLE by a BEACH and alongside the LANDING and PIERS were some old SHIPS and a VESSEL where a SAYLOR and a SEAMAN were standing on the BRIDGE. They gave a TOOT on the HORNE and waved at me with a GLASS in one hand and a STEIN in the other. They looked WILDER than anything I had met and fearing they MAY be HEAD HUNTERS, SAVAGES, or CROOKS, I hustled to the GARDNER'S cottage to seek shelter. Inside, I pulled down the CURTIN and threw myself on a COUCH. Soon I was asleep 'neath a COVER of VAILS. When I awoke, I hurried outside. There were no STARRS. A GALE had come up and

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for a minute it felt like WINTER with the chance of FROST, SNOW STORMS, or RANEY weather any second. In the distance I espied some old CARRS in a barn where a FARMER was working in the HAY LOFT who looked askance at me from under his big DERBY HATT. Being a poor DRIVER, I chose a FORD rather than a DODGE, HUDSON or PACKARD and drove around many a HAZARD toward the PIKE where a group of HALE and HARDY people were picnicking. Being hungry, I LEAPEd toward the group to BEGG for food. They asked me to GRACE their table around which sat BAKERS, BARBERS, BUTCHERS, BUT-LERS, CARPENTERS, COOKS, and 43 SMITHS all in HOLIDAY mood. They had sent a FOX, LAMB, and some WOLFS to SLAUGHTER and were having a GAY ole time. A FRIEND gave me some BACON, HAM, ROE, RICE, and PICKLES.

Leaving the picnic I began to GROW weary and was on the HUNT for PEASE and quiet. There on an EDDY I saw a CONSTABLE who helped me across the RIVER JORDAN where I saw a group of doctors pointing at me and crying, "She's RIDDLEd with PURPURA, PYLES, and RICKETTS!"

Frightened, I awoke and found myself back in the Alumni Office. It had all been a dream! It was the end of another DAY and I still had thousands of names to check.

From the Boston Gazette, Jan. 7, 1811

Medical Institution of Harvard University

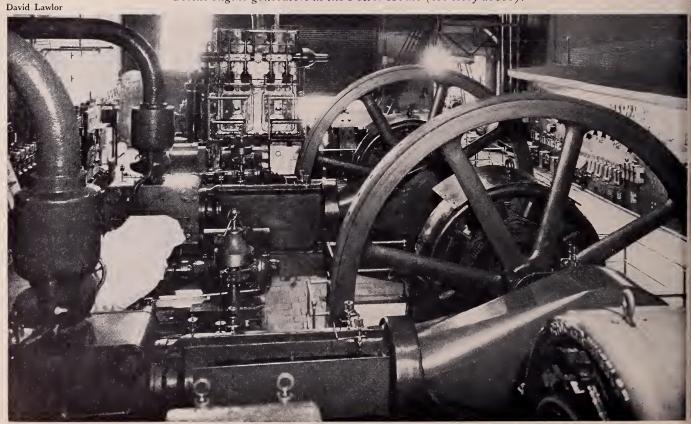
DURING the continuance of the Lectures, which will be until the 10th of February next, Surgical operations will be performed, and the subsequent attendance afforded gratis, by the Professors of Surgery, Doctors Warren, senior, and Warren, junior, on all persons whose circumstances shall be such as to render them proper objects, provided they bring certificates to that effect from the Selectmen of the town where they reside.

Two Giants Retire

Heavy with age and obsolescence, the two huge Corliss Engine Generators in the Medical School Power House (pictured below) were scrapped this last summer to make way for two compact new turbo-generator units. The Corliss Generators were installed during the building of the present Medical School in 1904.

The Power House, across the street from the Children's Hospital, has recently begun to modernize at an accelerated rate to provide adequate building services for the fast-growing Medical Center. Over the past two years,

New turbines for old engines: A last look at two Wisconsin Corliss engine generators in the Power House (see story above).



the boiler plant (behind the left-hand brick wall) has doubled in size and the problem of auxiliary electric generation has come to the fore.

Taken in May of this year from the overhead walkway in the "Engine Room," this view shows the No. 3 and No. 2 Wisconsin Corliss Generators, each of which, "less flywheel and generator," weighed 25 tons. Anyone need a conversation piece?



Inside H.M.S.: Mechanicality

There is now a room in the basement of Vanderbilt Hall dedicated to the automatizing of the eating habits of H.M.S. students. Lining the walls are glassy-eyed, baked enamel and stainless-steel vending devices that reinforce the insertion of coins with every imaginable reward. I mean there are six different flavors of effervescent water, five different preparations of coffee, fourteen types of sandwiches, three puddings, pie, six types of filled rolls and cakes, ten brands of cigarettes, ten brands of candy, three flavors of milk, and three ice cream preparations. The decisions to be made in that room when a fellow has an extra dime are almost more than psychic equilibrium can bear. O, there have been vending machines in the past, but these were nothing save brazen overtures to the present coin-operated symphony.

A long time ago, eating was an event. Now, the short order, frankfurter, quick freezing, cellophane and high serum cholesterol have reduced the prestige of good food and its consumption to an abysmally low point, with the result that devices encroach upon personalities in the preparation and presentation of what is to be eaten. I am not one-hundred-per-cent alarmist, for the Vanderbilt dining hall will remain the center of enteric activity and of serious or frivolous conversation; the dining hall can hardly be compared to lounging about in front of a clanking and rumbling machine which disgorges — upon proper stimulus — a refrigerated snack which the consumer devours while climbing Vanderbilt stairways or waiting for a public conveyance.

In fact, there is only one very disturbing aspect to this threat of the impersonalized approach to eating: the fatal attraction of machines for man. This is founded upon a), their very mechanicality, and b), their appeal as a gambling device. I mean there is the chance the machine will fumble the order. The coin-changer returns an extra nickel, the milk machine produces two cartons for one, the coffee machine pours a cup with cream and two sugars, rather than one; it is this type of infrequent behavior which fulfils the basic dream of the generation, which is the getting of something for nothing. Even short-changing has its compensations, for, after the initial moment of anger, the consumer realizes the machine has made an error, and that the device is not as efficient as its sterile appearance leads mankind to believe. I propose that this is quite a comfort.

Well, I resent machinery that must be coaxed to deliver a meal. And I suppose each of us despairs his dealings with these infernal devices. Perhaps the broad and proper attitude is that while one machine can do the work of fifty ordinary men, fifty machines cannot do that of one extraordinary man.1

So who's extraordinary?

Paul Davis, '63

¹E. Hubbard

From the Boston Gazette, Feb. 18, 1811:

"A word to the Wise" Is better than a Volume to the Vulgar.

A CERTAIN cure for a certain disorder by means of the water as prepared by the late Dr. F. Bertody, once a member of the Royal College of Physicians of Venice, Physician to the Count de Provence, now Louis XVI. This excellent medicine is accompanied by a pamphlet, in which every patient will find a description of his own case. The whole business can be conducted in the most private manner. In its operation it is entirely free from those disgusting effects which the use of mercury is generally attended, and is therefore peculiarly deserving the attention of those few males who may stand in need. It has for the last fifteen years been recommended in the most obstinate cases by the first physicians of the town, and a medical gentleman, now high in office in the U. States, once gave a certificate of its remarkable efficacy in this disease. The price is 5 dls. and may be found at the corner of Winter-street, and the public are assured that it will in the end prove cheaper than any advertised article of the kind.

Medicines of the very best quality, and of the latest importation, may be found as above, personally delivered by the proprietor, or by those fully competent to the business.

Medicine Chests put up or replenished.

Dec. 10

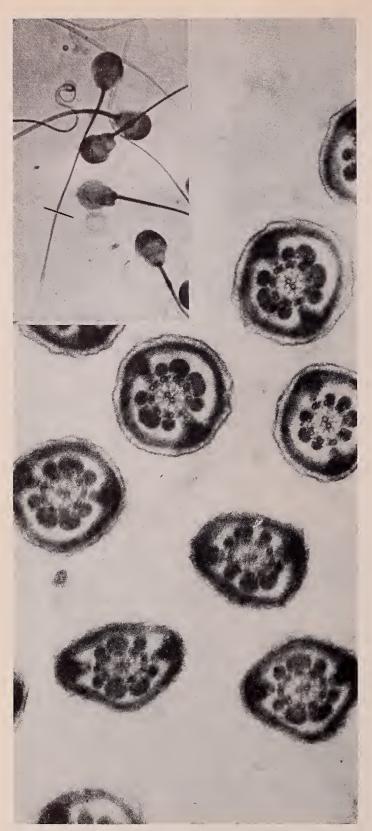


Fig. 1. An electron micrograph showing the complex structure of cross sections of the tails of spermatozoa which, in the inset, appear under the light microscope as slender dense lines devoid of internal structure.

Renaissance in Anatomy

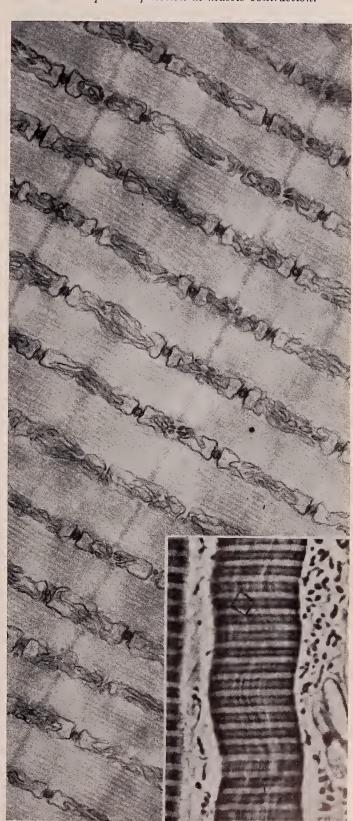
Don W. Fawcett, '42
Hersey Professor of Anatomy and
Head of The Department

ANATOMY, the oldest of the basic medical sciences, has been through two classical periods of great productivity. The first of these developed in the 16th century when anatomists, following the methods and inspiring example of Vesalius, began rapidly to discover by dissection the gross structure of the human body. The second golden age in the history of anatomy began with the introduction of well corrected lenses for the compound microscope and the enunciation of the cell theory early in the 19th century. There followed a period in which such discerning observers as Muller, Purkinje, Flemming, Kölliker, and Heidenhain laid the foundations of modern histology and pathology which have contributed so greatly to the development of scientific medicine. The history of the Department of Anatomy spans a major part of this period.

When Oliver W. Holmes returned from his medical studies in Paris in 1835 he brought back with him a microscope in which he took great delight. On becoming Professor of Anatomy and Physiology at Harvard Medical School in 1847, he fitted up a "Microscope Room" in the attic of the Grove Street Medical Building, where he taught microscopy. He devised a class microscope with a built-in oil lamp as a light source and a convenient handle so that it could be passed around from student to student for demonstrations (Fig. 3). Dr. Holmes could scarcely have foreseen in 1847 that little more than one hundred years later, every student would have a compound microscope and would have demonstrations on an electron microscope with a hundred times the resolving power of his first classroom demonstration model.

It is likely that today our boldest imagination of the future role of the electron microscope in medical education is as fettered to our past experience as was Dr. Holmes's in the 1840's. It may not be too rash an anticipation of judgement of history to state now that the invention of this instrument and the development of techniques for its application to the study of the tissues have launched anatomy on its third great period. The electron microscopes in current use provide for direct magnifications ranging from 1000x to 50,000x, with images sharp enough to permit a tenfold additional photographic enlargement. The upper limit of useful magnification is therefore about 500,000 diameters compared to about 2500 for the light microscope. The meaning of these magnifications is hard to grasp unless translated into the dimensions of more familiar objects. A dime enlarged 200,000 times would be about two miles across, or a red blood corpuscle magnified 500,000 times would be over ten feet in diameter. But, there are limitations to what can be examined with this instrument. The low penetrating power of electrons makes it necessary to cut the specimen into slices two millionths of an inch in thickness. A few years ago the cutting of such thin sections seemed to present an insuperable problem, but the difficulties have rapidly been overcome by a series of ingenious tech-

Fig. 2. A small area of a single muscle fiber (an area like that enclosed by the rectangle in the inset) is enlarged in this electron micrograph. An elaborate system of tubules called the sarcoplasmic reticulum is seen between the myofibrils. These membrane-bounded channels were unknown to physiologists a few years ago but are now believed to have an important function in muscle contraction.





Dr. Fawcett

niques and relatively simple mechanical devices, and a vast new area of fine structure has now been opened up for exploration.

The Department of Anatomy, now housed in modern laboratories on the first two floors of the recently renovated Building B-2, has the staff and equipment to play its part in the exciting work of restudying all the tissues to include details of structure down to the macromolecular level of organization. Its four electron microscopes serve the research needs of the staff members and provide for the training of postdoctoral fellows, graduate students, and selected medical students in the techniques of specimen preparation and in the interpretation of electron micrographs.

The research activities of the department fall mainly under the broad heading of cell biology, but they also include projects in such diverse fields as comparative anatomy, developmental biology, environmental physiology, endocrinology, neuroanatomy, reproductive physiology and radiobiology. Only a few can be presented here as examples of the scope of the department's interests. In studies being conducted with the electron microscope on the germinal epithelium of the testis, attention is

focused upon the complex cytological changes that take place during development of the spermatozoa. Numerous points that were left in doubt by the limited resolving power of the light microscope have been settled by electron micrographs which provide extraordinarily sharp images of many of the steps in the evolution of these highly specialized reproductive cells. The results of these studies are contributing to a better understanding of the morphogenetic functions of the various cell organelles in cell differentiation. For example, the Golgi apparatus, whose precise function was previously obscure, is found to play a dominant role in the formation of the acrosome, the structure at the tip of the sperm head which seems to have an important part in penetration of the ovum during fertilization. The slender tails, less than 1 micron in diameter, that are responsible for the swimming movements of the spermatozoa are barely visible with the light microscope, but can be magnified to the diameter of a garden hose in the electron microscope and are then found to have an elaborate internal structure consisting of eighteen longitudinal fibers arranged in two concentric rows around a central pair. These longitudinal elements are surrounded by a sheath of circumferential fibers and the whole complex is enclosed by an extension of the cell membrane. In cross sections (Fig. 1) the attractive radial pattern formed by the internal fibers of the sperm tails provide an impressive confirmation of the ancient aphorism that "the author of nature is nowhere more perfect than in the minutest of his works." Although these investigations are being pursued as fundamental studies in submicroscopic cytology, they do hold some promise of ultimate practical application in that the micrographs of the germinal epithelium disclose events in spermatogenesis which may prove to be vulnerable points of attack in the development of measures for the physiological control of conception; and the detailed analysis of the fine structure of the sperm tail is yielding information about the mechanism of sperm motility which may one day find application in the management of clinical problems of male sterility.

Electron microscopic observations in the past few years have entirely changed the prevailing concept of the mechanism of muscle contraction. Huxley, of University College, London, has made splendid electron micrographs of muscle at magnifications of 200,000 to 600,000 x which show that the myofibril, the smallest unit visible with the light microscope, is made up of overlapping sets of filaments of macromolecular dimensions and he has proposed a new theory of muscle contraction wherein the shortening is accomplished by sliding of one set of filaments over the other. Electron micrographs have also revealed a system of intracellular tubules called the sarcoplasmic reticulum which ramifies throughout the muscle fiber forming elaborate networks around the individual myofibrils. This labyrinthine system of intracellular channels, unknown to physiologists until a few years ago, is now believed to

have an important function in conducting impulses from the cell surface to the contractile elements in its interior. Evidence bearing upon this interesting hypothesis is being sought in comparative studies now being carried out in the Department of Anatomy on the organization of the sarcoplasmic reticulum in muscles of different speeds of contraction. Among the muscles being studied are those in the swimbladder of certain marine fish that produce audible sounds by rapid vibration of the taut wall of the gas-filled bladder and also the cricothyroid muscle of the bat, which must change its state of contraction very rapidly to modulate the short bursts of supersonic sound used in the radar-like system of echo location which enables bats to avoid obstacles and find their prey in the dark. These studies are revealing suggestive correlations between the speed of contraction of muscles and the degree of development of the sarcoplasmic reticulum. In Figure 2 a very small area of a single fiber from a fast-acting muscle, shown at a magnification of 40,000x, illustrates the remarkable regularity in the distribution of this elaborate system of tubules in the clefts between the myofibrils.

The two examples presented above will serve to illustrate the types of problems in tissue ultrastructure being approached, and to demonstrate the great reach of the electron microscope. Some of the other projects in this category now in progress are: a study of the finer cytology of the gastric mucosa in different phases of digestion; an investigation of the fine structure of counter-current systems of capillaries in relation to the mechanism of exchange across the vessel walls; an examination of particulate glycogen at high resolution; and a study of the structure and morphogenetic potentialities of model systems of phospholipid membranes formed in vitro. Several of these show promise of yielding significant results.

A microscope slide or an electron micrograph is, in the words of Cannon, "a frozen moment in the flux of life." Other techniques are needed to provide a full picture of the dynamic processes involved in embryonic growth and tissue repair. One such method is autoradiography. When a radioactive isotope is injected into an animal in a compound that is taken up selectively by certain cells, the subsequent movements of those cells can be followed by making autoradiographs at various time intervals after incorporation of the isotope. To do this, thin slices of tissue are coated in the dark with photographic emulsion. The radioactive emanations from the isotope betray the location of the labelled cells by forming black grains of reduced silver in the overlying photographic emulsion. Thus, in a sense, the cells take their own picture. This method is being used by one group in the Department to trace the migrations of cells in early stages of development of the brain. In the hands of another member it is being applied to the classical problem of the mechanism of regeneration of amputated limbs in salamanders. Regeneration is accomplished by proliferation, and subsequent differentiation, of primitive blastema cells that arise soon after amputation of the limb. The formation of these cells apparently involves a return of some of the specialized cells of the stump to an embryonic state, but the identity of the cells that dedifferentiate to form the blastema has long been a subject of controversy. The tracing of cells by autoradiography after injection of tritium-labelled thymidine is providing clear answers that could not be obtained by any of the classical methods of experimental morphology. While humans cannot regrow limbs, they do exhibit the faculty of regeneration in less dramatic ways such as in wound-healing and repair of various organs. A similar capacity of cells to return to an embryonic state is manifested in these examples of benign growth and to a more exaggerated degree in malignant growth. The application of isotopic labelling and other modern methods to studies of limb regeneration and early embryonic development may provide clues to a better approach to the difficult problem of dedifferentiation and uncontrolled growth in human cancer.

Research in histochemistry, which flourished in the Department under the leadership of Professor Wislocki, is

Fig. 3. Dr. Elizabeth Hay, Assistant Professor of Anatomy, seated at the electron microscope examines the first classroom microscope in America, devised by Oliver W. Holmes for demonstrations in histology in 1847. An oil lamp was the light source and a convenient handle was provided so that the instrument could be passed from student to student.



carried on by several members. Changes in glycogen, lipid and enzymatic activities of the rat placenta are being studied at various stages in the course of gestation, to establish the normal sequences of chemical differentiation as a baseline for future experimental studies on the histophysiology of the placenta. Another group is combining histochemical and organ-culture methods. The cultivation of small fragments of organs for short periods in chemically defined media has the advantage of removing the tissues from the complex homeostatic mechanisms of the intact animal, and isolating them in a simplified fluid environment where their differentiation and specific functional activities can be controlled to some extent and manipulated experimentally. When small pieces of embryonic brown adipose tissue are set up as organ cultures they continue their differentiation and retain a near normal structure in vitro. They are capable of responding to insulin by increased deposition of glycogen, and the glycogen is subsequently broken down in the cells and utilized in the synthesis of fat. In electron micrographs of such cultures, interesting changes are observed in the structure of the mitochondria and in their relation to the developing fat droplets. In other experiments, substances known to cause release of fatty acids from adipose cells are being added to the culture medium so that the changes in fine structure of the cells in this phase of activity can be studied in electron micrographs. Other in vitro studies are directed to the absorptive capacity of the yolk sac and the uptake of lipid by everted sacs of intestinal mucosa. These projects, which combine the techniques of histochemistry and electron microscopy with organ culture, make it possible to study accumulation of the cell product and changes in the number, location and

structure of the cell organelles in response to the experimental conditions. This approach promises to yield useful information on the function of cell organelles which could not be obtained in other ways.

A productive program of research in the physiology of hibernation has been conducted in the department for several years. This work has as its aim a clarification of the remarkable physiological adaptations that enable some animals to lower their body temperature to near freezing levels; to slow their heart from 250 beats per minute to 5 and their respirations to less than 1 per minute. It has been shown that the hibernating animal is not reduced to the passive condition of a cold-blooded animal but possesses homeostatic mechanisms that continue to operate at low temperature. The respiratory center remains sensitive to increased partial pressures of carbon dioxide and the animal senses and responds to dangerous further lowering of the environmental temperature by increasing its metabolic rate to maintain its body temperature above freezing. After days or weeks of dormancy the process of arousal is initiated by some unknown mechanism and the animal brings into play all of its heat-generating and heat-conserving mechanisms, to raise its temperature in one or two hours from a few degrees above freezing to 99°F. (See Fig. 5). The slowing of the heart on entering hibernation, and speeding the heart in the early stages of arousal, precede the corresponding changes in temperature. The mechanisms responsible for these changes in heart rate and the associated adjustments in hemodynamics are now being studied in ground squirrels with a chronically intubated aorta which permits intravascular injection of vasoactive

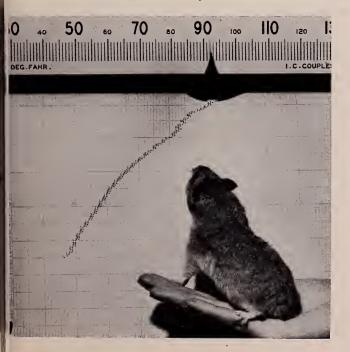
Fig. 4. Dr. Erikson makes skeletal measurements on monkeys in a study relating body proportions to mode of locomotion.



or blocking agents and allows direct measurements of blood pressure without arousing the animal from dormancy. Although natural hibernation and induced hypothermia are very different states, nevertheless, these studies of the physiological mechanisms by which hibernating animals adapt to cold may reveal basic principles that can be applied in the practice of artificially lowering the body temperature of humans undergoing heart surgery. Research in regulatory physiology may seem beyond the usual limits of anatomy, but these investigations have had a salutary effect in this environment by engendering collaborative studies on cellular changes in hibernating animals and by stimulating morphologically trained colleagues to think about physiological problems.

The subject of gross anatomy is still strongly represented in the teaching and research activities of the Department. The observant anatomists of the past have left little of human anatomy undiscovered in the four hundred years since Vesalius, but recent progress of thoracic and orthopedic surgery has given point and clinical significance to structural relations that, in the past, were only of academic interest. Work is being done by one of our clinical associates to meet the continuing need for reinvestigation of the applied anatomy of certain regions to support technical advances in surgery. In addition, there is an ambitious program of research in comparative primate anatomy. An extensive collection of specimens including representatives of all the genera and most of the species of New World monkeys is being

Fig. 5. A hamster used in hibernation research contemplates the curve on the Micromax which recorded the rise in his body temperature from a few degrees above freezing to normal, as he awakened from hibernation.



studied, with the main focus of interest on locomotor types and body proportions (Fig. 4). The information being assembled relating skeletal measurements to mode of locomotion will doubtless prove more valuable in typifying the habitus and mode of life of a primate than the teeth, upon which so much reliance is now placed in taxonomic and evolutionary studies. As more fossil apemen are uncovered there is increasing need for such data, as a basis for the interpretation of the place of each in the evolution of man and other living primates.

The progress of science is seldom gradual and continuous. The introduction of an important new instrument or a new basic concept in a particular field starts an exciting period of rapid discovery. This is followed by a fruitful period of energetic exploitation of this technological or ideological advance, and then, gradually, a period of depression sets in as increased efforts in a well-worked field yield results of steadily diminishing significance. A distinguished anatomist in such a period made a practice of admonishing his students at the beginning of the course against seeing an anatomical "discovery" in every variation encountered in their dissection.

"Our predecessors," he said, "have left us little to discover. . . . Anatomy may be likened to a harvest field. First come the reapers who, entering upon untrodden ground, cut down great stores of corn from all sides of them. These were the earliest anatomists of modern Europe, such as Vesalius, Fallopius, Malphighi, and Harvey. Then come the gleaners; all gather up ears enough from the bare ridges to make a few loaves of bread. Such were the anatomists of the last century - Winslow, Vicq d'Azyr, Camper, Hunter and the two Munroes. Last of all come the geese, who still contrive to pick up a few grains scattered here and there among the stubble, and waddle home in the evening, poor things, cackling with joy because of their success. Gentlemen, - we are the geese!"

That was a generation ago, when the scope of anatomy extended scarcely beyond the threshold of the dissecting room, and the microscope was still on trial. Anatomists are no longer "the geese" picking up a few scattered kernels of truth overlooked by our predecessors. The electron microscope, polarizing and interference microscopes, autoradiographic and cytochemical techniques and other modern implements of research have produced a renaissance in anatomy and have brought new freshness and vigor to its teaching. We are "reapers" again, just beginning the harvest of the challenging field of cell biology. Never has anatomy had a brighter prospect and never has it had more to contribute to the other basic sciences and to clinical medicine.



A French medical emblem



The U.S. Medical Corps emblem



A German medical emblem

DIAGNOSIS DEFERRED

Under the title Cave Serpentes, the Bulletin's relatively esteemed contemporary, the New England Journal of Medicine,1 recently commented on the unorthodox use of the two-snaked wing-capped caduceus as a symbol of the healing art. Although occasionally accepted in this relation almost by default, the twin-vipered rod has been embraced most tenaciously by the Medical Department of the United States Army, which for reasons unknown adopted it as its insigne in 1902. This was well after the dust of the Spanish-American War had settled and Cuba had been freed from the oppressor's yoke.

Well known as the staff of Mercury, the messenger whose function was to conduct departing souls into their extraterrestrial abiding place, the caduceus symbolized in this particular only one of the mortal functions at which the physician is expected to officiate, and not always the most agreeable of them. The selection of the caduceus as the standard around which the Army Medical Department might be expected to rally could also bear reference to former days when mercury was routinely employed by the medical profession even to the point of salivation. Moreover, if one must see double, nothing could be more appropriate than that snakes should be the object of such vision.

As suggested above, the Department had not always cleaved to Mercury.

The late Dr. J. L. Bremer indicated some time ago in the New England Journal² that the knotty stave of Aesculapius with its solitary serpent had been the emblem of the service early in the nineteenth century and had disappeared, also for reasons unknown — but possibly because the Department itself had nearly reached the vanishing point. The British and French military medical establishments have always favored the single Aesculapian reptile, and the Medical Corps of the United States Air Force has followed suit, having little use for any more earthbound creatures than tradition required, and being well able to supply its own wings. It is of interest that the British Practitioner employs two serpents to guard its staff, but the staff is wingless.

What really excited the New England Journal of Medicine to burst so suddenly into print on the subject was a letter by Major General R. E. Barnsley published in the British Medical Journal of May 28, 1960. Written from the Royal Army Medical Corps Historical Museum at Church-Crookham, Hants, it gives publicity, if not credence, to a recent theory that the staff of the healer was not only surrounded by a serpent but was surmounted by a mirror. This curious embellishment, so foreign to all that is currently known about Aesculapius, was not intended for the personal toilet of the bearded deity but for the

De Serpentibus et Arte

fell uses of the fenny denizen that had wrapped itself around the stick.

The snake, in this version of the ophidian symbolism, ill tempered and venomous, became periodically alarmed at its own reflection and spit its venom at it, lashing its tail in the process. The venom was scraped off the mirror, processed in some occult laboratory, and put to its well-known therapeutic purposes, much as the sting of the bee is used in curing the most obstinate forms of arthritis. The mirrored staff equipped with serpent is part of the authentic emblem of Revue Internationale des Services de Santé des Armées de Terre, de Mer et de l'Air and is regularly reproduced on its cover.

General Barnsley entertained some doubts regarding the authenticity of this somewhat elaborate theory, and was borne out by a letter published in the British Medical Journal of July 2, 1960, from Dr. Hymie Gordon of the Johns Hopkins Hospital, of all places. Dr. Gordon had gone to the trouble of examining 36 representations of Aesculapius, and found in no instances any mirrors attached to the staff. Furthermore various classical observers, including Pausanias, Pliny and Aelian, "all testify to the friendship and even affection that the Asklepian serpent bore for man, the last-named author stating that 'its bite is not injurious but gentle'."

The history of herpetology and the

reptilian aspects of the healing art stretches back into antiquity and beyond; its complete exposition would require more paragraphs than the editor of the *Bulletin* customarily allows for this department. Suffice it to say that the pre-Hellenic Minoan serpent goddess of healing in her flounced skirt held some sort of an adder twined around each outstretched arm, and Cleopatra found the sting of the asp singularly effective in relieving her of her earthly troubles.

To come nearer home, the Boston Medical and Surgical Journal of September 2, 1828 contains an "Account of the Blowing Snake" as communicated to it by Dr. H. Conant, of Maumee, Ohio. Although not recommended at the time for therapeutic purposes, the potency of this snake was such as to present distinct possibilities.

Dr. Conant, on May 10 of that year, had been called to visit a lad of fifteen whom he found "much swollen in his countenance, much affected with nausea and giddiness," with violent pain in the limbs, a weak pulse and finally a universal prostration. An emetic-cathartic was administered, to be followed with carb. ammon.

Two miles further on the doctor called on a man of forty years of age, laboring under precisely the same symptoms as the boy described above. The same treatment was prescribed.

The next day, when visiting the same patients, he was called to see a girl fourteen years of age in the same neighborhood, with similar symptoms, but more severe. Under the same treatment as the others, but with the addition of olive oil, her recovery was more rapid although not complete for several weeks.

It transpired that three days before these patients were seen "they had all been exposed to the effluvia of the blowing snake. The man had killed two and the boy and girl had each passed one, at the distance of a yard or so to the leeward. A native Frenchman of the country, who says he has before witnessed the effects of these snakes, would not believe that those were affected that way. For, he says, those blown upon, always swell and burst open and invariably die. . . .

"The snake is about $2\frac{1}{2}$ feet long and very thick in proportion. Its color is brown, and when irritated (it) has yellowish cheeks. It is said, that during its expiration, a yellowish steam is visible issuing from its mouth to the distance of several inches, but I know nothing of it, having never seen a living snake of the kind."

REFERENCES

- Editorial. Cave serpentes. New Eng. J. Med. 263:561-562, 1960.
- Bremer, J. L. The caduceus again. New Eng. J. Med. 258:334-336, 1958.

THE HARVARD MEDICAL SCHOOL

Mémoires de Pierre de Sales La Terrière et



IN 1788-89

de ses traverses



KNOWAVER PRENTED & SOLD by PAUL REVERE, BOSTON.

PIERRE de Sales La Terrière was born in Alby, Languedoc, France, on September 23, 1743. As a young man, he studied for a year and a half with M. de la Rochambeau, physician to the queen. These studies were brought to an abrupt end by Rochambeau's sudden death. Shortly afterwards, La Terrière accompanied a fellow student, an Englishman, on a trip to England. From England he went to Canada, arriving at Québec on September 5, 1766.

For the next few years he supported himself, partly by trade and partly by the practice of medicine. He became the Québec representative of a company which operated a forge at St. Maurice. In 1779, however, he was arrested by order of General Halimand, on the charge of treason and accused of having furnished bullets to Montgomery's army, encouraged troops to desert and of abetting in one way or another the projected American invasion of Canada. La Terrière protested his innocence and loyalty, but whether he was innocent or not, he was a person of considerable prominence and would serve as an excellent example. He was accordingly imprisoned at Québec with three other Frenchmen who had been active in stirring up sedition.

In August, 1782, he was released on the condition that he would voluntarily leave the province, and he removed to Newfoundland. After the peace of Versailles he returned to Canada and took up practice again, but in April, 1788, he was again in trouble. An ordinance was passed restricting the practice of medicine to persons who held diplomas from recognized institutions. La Terrière had no diploma and failed in his examination; thereupon, protesting against his harsh treatment, he journeyed to Cambridge and studied for a year at Harvard Medical School. On his return to Canada he was licensed to prac-

"Boston is a fine maritime town," wrote La Terrière. "The harbor, with its long wharf, is very commodious; on this wharf there is a row of houses or store houses. The fair sex," he added, "surpasses in beauty any that I have seen in America. A very pure English is spoken." This view is from an engraving by Paul Revere. Courtesy of the Massachusetts Historical Society.



Boston in 1775. This idyllic view is from the vicinity of the Shirley House, Roxbury (left), looking toward the South and East Shore of Boston. La Terrière extolled the ocean breezes and salubrity of Boston's climate, which "in winter, as well as in summer, allows the existence of only inflammatory, nervous and bilious indispositions and, as elsewhere, those caused by intemperance." Courtesy, Massachusetts Historical Society.

tice and from this time until 1810 he devoted himself chiefly to his profession.

With regard to the character of the *Mémoires*, little need be said. Allowance should be made also for the fact that La Terrière was writing for his children and grand-children and wished to appear a person of considerable importance in their eyes. So, for example, he dwells upon the eagerness with which the best families of Cambridge and later those of Plymouth received him.

With this introduction we can take up Terrière's own account:

IT is from memory, twenty-three years afterwards, that I am writing the history of my journey to the United States, in case the exact account, forgotten in 1788 and left with Dr. John Warren in Boston, should be lost. It would be worth while for my children to reclaim it, in order to compare it with the present narrative and to correct any errors which may slip from my pen."

The detailed account of this journey is here omitted. We take up the narrative once more as he comes near Boston.

"As we approached the large town of Boston the buildings become more elegant.

"A curious thing which I have forgotten to mention happened to us between Plymouth and Concord. On Sunday morning we were stopped on the road and haled before a *squire* or magistrate, who asked why we were traveling on the *Sabbath* day. We replied that we were strangers, Canadians; that we were on our way to Boston and that the condition of our purse forced us to make

haste. 'In honor of what prejudice is it,' we exclaimed, 'that such a despotism makes itself felt in a republican country, when nowhere else in the entire world is a person subject to such restraint?' The squire, having only puerile reasons to give, concluded by saying, 'You are welcome at my house. I prefer to entertain you rather than let you go and see you stopped at any minute. It is one of our weaknesses in this district and it has acquired the force of a law.' We stayed with him, well fed and well lodged, and he himself conducted us back to the highway and wished us a pleasant journey. A good man, but attached to the Methodist fanaticism!"

After arriving safely in Boston and explaining his plight to President Willard of Harvard College, La Terrière was furnished with a letter of introduction to the "professor of anatomy," Dr. John Warren.

"The next day, in the afternoon, Dr. Warren on his way from Cambridge, came to see me and told me to go to his house at nine o'clock the next morning; the whole Corporation was to meet there to have me pass the admission examination, and he would introduce me into their presence. I was on time. When I appeared before the assemblage everyone greeted me very cordially. The president then opened the meeting: 'We are gathered here,' said he, 'to render justice to a foreign candidate who presents himself to take his course in medicine at our university. Shall we ask him the usual questions in order to find out if he is worthy?' All answered, 'Yes. Who are you? Where did you receive your education?' 'I am a Frenchman by birth. I pursued my elementary studies at Alby, a town of Languedoc, and my humanities at Toulouse; in addition I have taken a course of

mathematics at La Rochelle.' 'Are you a practitioner in medicine? Where have you studied medicine?' 'At Paris, with Dr. De la Rochambeau, physician to the queen, in 1765 and 1766; I have taken the course at Saint-Côme, under Dionis, and have assisted at the Hôtel Dieu.' 'Take oath of these things.'

"They were unanimously of the opinion that I might and should be admitted as a candidate for a diploma in my profession and that I should enjoy the same privileges as all the other students.

"Without loss of time I began on the next day to attend the demonstrations; they were held at different hours, in order that one student might attend them all. These are the names of my professors: Mr. Benjamin Waterhouse in medicine; he followed the Colinian system in nosology and applied it for or against all the other authors. John Warren, professor of surgery and of anatomy, followed the system of Hallet (Haller), and of Winslow and Bell in surgery. Aaron Dexter taught chemistry and materia medica, following the system of Fourcroy.

"I was directed to take notes of each professor's lectures on theory and to make use of the authors in the library to help me in this work. I had thus plenty of

*"A l'Hôpital Darmhouse," the original has it, and apparently refers to the Boston almshouse which stood on Park Street; the Cambridge institution would scarcely have afforded sufficient material. That the students were granted admission to the almshouse at this time is, however, surprising. The college authorities had tried to arrange for such clinical work in 1784, but had met with opposition from the Boston Medical Society; it was not until 1810 that the Overseers of the Poor of Boston formally voted to allow the medical students to visit the almshouse.

work laid out for me without counting the dressing of wounds at the almshouse*; I took my turn there every Wednesday and Thursday.

"As I had crossed the mountains that separate Canada from the United States solely for the purpose of obtaining a diploma, I was firmly resolved to profit by every moment, so that I should not fail in the examination when my period of study should be finished. For in this situation it is not as in many others; here there are no favors. One must know how to cure diseases in accordance with recognized principles, in order to pass the examination before an assemblage of scholars, by whom the slightest hesitation is set down as ignorance and who, in such a case put the candidate back a year — a year to be added to the two years absolutely necessary. So my motto was $Réussir\ ou\ .\ .\ .\ mourir.$

"A few weeks sufficed for me to make the acquaintance of all my fellow students and of all the best people in the little town; the latter in a most affable manner sought my further acquaintance.

"HOW one is able everywhere to do both evil and good! Among the Frenchmen with whom I was intimate there was one from Martinique, very rich and a fop to his fingertips. He had been recommended to one of the leading merchants of Boston, with whom he lived as a son of the house, and one of whose daughters came to be with child by him. He dined with me every Sunday and he made me a hundred offers to induce me to establish myself with him in Martinique; by so doing he thought to hold me.

"One day, with tears in his eyes, he confessed the whole secret to me and besought me, with promises of making my fortune, to compound remedies to produce a miscar-

This account of a student's life and experiences at the Harvard Medical School a few years after its foundation has been culled from the Boston Medical and Surgical Journal for April, 1910. Even though the work contains errors of fact, and is full of exaggeration, it gives us what is probably a substantially trustworthy picture of a student's life at the Medical School at that time; and it is by some years the earliest picture of this kind which we have.

Written in 1812, three years before La Terrière's death, the Mémoires remained in manuscript in the possession of his descendents for more than half a century. At length, in 1870, they came to the notice of the Abbé Casgrain, the Canadian historian, who recommended their publication; they were thereupon edited by Alfred Garneau and, in 1873, were printed in Québec in a small volume of 271 pages. Owing to the intimate details which La Terrière

gave of his family affairs, his descendents were unwilling that the work should be published; an edition of one hundred copies only was printed for distribution among relatives and friends. The copy from which the present translation was made belonged to Francis Parkman and was bequeathed by him to the Harvard College Library. It was translated from the original French, annotated and furnished with an introduction by Mr. David Heald of the Harvard College Library.

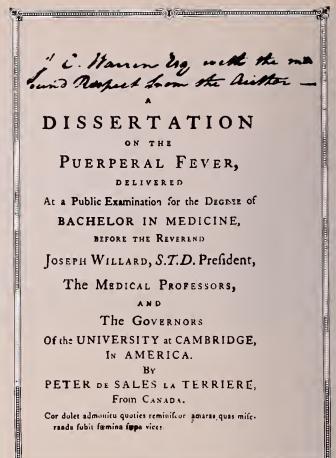
This story gives a quaint picture of the Medical School in 1789. Although the first professors were inducted into office on October 7, 1783, no degrees were conferred until 1788. In that year, the degree of Bachelor of Medicine was awarded to two candidates and in 1789 it was given to two more — La Terrière and William Pearson.



Pierre de Sales La Terrière

riage for the girl; otherwise he was going to depart and he would be the unhappiest man in the world. 'I believe it,' said I. 'I think a great deal of you, but you must know that I was born a gentleman and that I am incapable of committing a crime. It would be a fine thing for me to have gone from France to England, and from England to Canada, to come from Canada to get myself hanged in Boston! For every other service, be it honorable and proper, I am ready. Since the fault is committed, this is my counsel: Either marry the girl at once or depart secretly by the first ship that sails.' 'And I am going to take the latter course,' he exclaimed. 'Never would her father or mine, for reasons of religion, consent to our marriage.' A week later I learned that he had gone. And, however, though he was no longer there, ten days or a fortnight after that a newly born baby was found one morning in the middle of the street opposite the house of the merchant. I had no doubts concerning the mystery, but it was not for me to speak.

"Four criminals who had been hanged furnished us ample material for dissection; I did not lose a single hair of them, but analyzed every part at the amphitheater and then took it home to depict on paper.



The title page of La Terrière's Dissertation

"There happened to die suddenly in Boston an aged spinster, large and fat. On receipt of the news, which was given us immediately by the beadle of Christ Church, we secretly purchased the body from him; he put very little earth upon it and left an iron shovel for us. On the following night - a black night - thirty of us carried the body away in a large sack. Someone had seen us, but before the police were able to approach near enough to find out what was going on, we gained the causeway by the flour mills; the first five or six watchmen who presented themselves were so clearly given to understand that they would have to let us pass that, seeing our superior numbers and fearing for their skins, they were not incredulous. We then proceeded in safety. The next morning the news of the theft of the body spread through the two towns; the relatives demanded a search warrant of the governor, but he, being a member of the Corporation of the college, refused it and the excitement gradually died down. We dissected the old woman secretly and at our ease; she was a superb subject! A comrade who later graduated at my side and I secured permission to work at night in the anatomical theater. We did not lose a moment in completing our study of the physiology, and the myological work that we offered



Holden Chapel about 1900, much as it was in La Terrière's day. To the left is the old Elm, "the tree" of Class Day celebrations. Traditionally bouquets were tied to its trunk for graduating seniors, caps and gowns flying, to retrieve for their sweethearts.

to the Corporation on the day of the Exhibition, and which was placed in the museum, will forever remain an honor to Pierre de Sales La Terrière and William Pearson.

ITH the spring the time of examination rapidly approached. This examination took place on May 1 (1789); of twenty-six candidates in medicine, only my good friend Pearson and I passed. The examination by the professors was exceedingly severe, for it was held before the Corporation and all the practitioners of the town of Boston, each of whom had the right to put two questions to the candidate in addition to some fifteen hundred asked by the professors. One physician in particular, thinking to embarrass me, asked with a pompous air what a sudorific was, and what was the most efficacious. 'A sudorific,' I answered, 'is anything that induces perspiration; and the best sudorific is to appear before such a large and honorable assemblage as this to answer their questions scientifically and properly.' The audience clapped their hands and exclaimed, 'Well answered! Our candidate deserves his diploma.'

"The twenty-four others received compliments on the attainments which they had shown, but which were not deemed sufficient to win them diplomas. So they were rusticated for another year.

"I had now only to prepare and carefully to compose a dissertation which could be defended in public on what is known as 'Commencement Day.' As I have said, my subject was puerperal fever. On the day of the public Exhibition, so impatiently awaited, I dressed myself in my gown with its small hood, and the square cap with its silk tassel, and repaired to the theater, where I remained seated in the chair of honor, until an audience of some three thousand (!) persons had taken their places and the president had directed the candidates to advance with order and decorum to offer their dissertations to the public and to defend them.

"The doctors took precedence of the other faculties and, as I was a foreigner, I was given the honor of being told to begin. I saluted the president and the assemblage and prayed that they would be indulgent, in view of the fact that I was about to express myself in a language that was not my own; then I read my dissertation on puerperal fever with the greatest ease and composure; having finished, I remained standing, firm and respectful.

"Several of the practitioners of Boston, exercising their right, went into the gallery opposite and entered into controversy with me concerning certain practical points of my subject, but I had so familiar an acquaintance, both theoretical and practical, with this branch, which I had practiced in Canada for a long time before this academical essay, that I replied to them without difficulty, and in my turn asked some questions in regard to climates and habits which embarrassed them greatly. The optime of the Corporation and the applause of the audience disconcerted my opponents to the extent of obliging them to yield and to recognize the merit of which I had given proof.

"After [the formal ceremonies], persons stationed at the doors distributed the five hundred copies of our theses to everyone who wished them, as a token of the gratitude of the candidates to their auditors. Thus ended this august ceremony.

"From the first of June until the fourteenth, when I left this town to return to Canada, I employed my time in visiting and thanking my friends. I purchased a horse for my journey; my friend, Dr. Warren, the professor of anatomy, speedily transacted this business for me, by addressing himself to a horse dealer, who at the end of three days procured me a large horse, some ten years old, neither too fat nor too thin, ill-favored and with a body of rather peculiar appearance, but an excellent walker and a trotter without an equal.

"On June 15, in the morning, with my Pegasus, that is to say, my new horse, carrying in addition to me a load of about two hundred pounds, I left this charming town of Cambridge and all these dear friends."

Editorial

CLASSICA REDIVIVA

"Foreign Language: Competence in a foreign language, either modern or classical . . ."

 Harvard Medical School Requirements for Admission Revised, May, 1960

It is probably of no significance that as doctors we are trained to look always down — down the barrel of a microscope, down at the cadaver between our forceps, at the experimental preparation benumbed and cannulated for our physiological education, down at the patient lying trusting before us. Even the act of looking "up" the rectosigmoid places the patient in a position that maintains the downward cast of our glance.

It must, therefore, have been a first-year man as yet unsullied by tradition who not so many years ago looked up at the ceiling of the foyer of Vanderbilt Hall. "Dans les champs de l'observation," he read as he spun round a full circle, "le hazard ne favorise que les esprits préparés." The small group of classmates who joined him to stare had all fulfilled their requirements with competence in German, and the message of the inscription was locked from their hungry minds — locked until there happily appeared a colleague competent in French. "Read it!" rose the cry. "What does it say?" Slowly, with the confidence born of knowledge, the student replied, "That is an aphorism from the Division of Basic Sciences. It reads, 'It is hazardous to distill alcohol in left field."

As the murmur of admiration arose, an eager youth pushed to the front of the circle and handed the savant a scrap of paper. "My old father pressed this into my hand," he said, "as I left the depot to come to Harvard. What does it say?" The savant took the paper and read aloud, "'Vita brevis, ars longa.' That," he said, with the confidence born of knowledge, "is an aphorism from the Division of Clinical Sciences. It reads, 'Gluteal adiposity is incompatible with longevity.'"

A clap of thunder shattered the silence, and in the twinkling of an eye there appeared before the little band a figure clad in flowing robes and carrying a staff entwined with writhing serpents. "Barbarians!" he roared. "Onto your knees before Aesculapius! Does not one among you recognize the first of the Hippocratic Aphorisms so tastefully done from the Greek into Latin by Master Galen?" He turned his head and called over his shoulder, "Clio, come here." From the ladies' lounge there walked a maiden. She was ravissante, einfach reizend, καλλίστη, pulcherrima — in short, in any man's language she was a stunner. "Boys," said Aesculapius, "Meet Clio, my date from Wellesley, who is majoring in history — doing her thesis on 'Language Requirements at Harvard Medical School Since 1830.' Amuse the boys, Clio, as we go upstairs to the mixing bowls for libations."

"In 1830," Clio began obligingly, "the catalogue said of the student: 'If he has not received a university education, he shall satisfy the Faculty of Medicine in respect to his knowledge of the Latin Language and Experimental Philosophy.' This state of affairs persisted until 1871, when following a 'radical change' in the curriculum, the language requirement was amended as follows: 'College students

intending to study medicine are advised to pay special attention to the study of . . . the French and German languages, while in college.' The oversight with regard to the Classics was partially remedied in the catalogue of 1875-76, which stated: '. . . All students seeking admission to the Medical School must present a degree in Letters or Science from a recognized college or scientific school or pass an examination in the following subjects:— 1. LATIN. The translation of easy Latin prose. French or German will be accepted, however, as a substitute for Latin.' In 1880 Latin was restored to full status when the student was required to pass an examination in that subject '. . . on the Monday preceding the last Wednesday in June or September, at 10 A.M.' This requirement was thus explicitly set forth until 1900; in that year for the first time a college degree became mandatory for admission to Harvard Medical School.

"From that time on a reading knowledge of French or German was encouraged, but no mention was made of the Classics, presumably because knowledge of at least Latin was implicit in a college degree granted early in the century. As the decades wore on, however, as global wars raged, and as the fabric of tradition began to crumble, the Classics all but disappeared from the curricula of institutions of higher learning. It could no longer be assumed that Greek or Latin graced the background of the Harvard Medical student. A decade after the mid-point of the century, in May of 1960, recognizing the value of the Classics as language and as mental discipline, the powers-that-be at the Medical School decided — "

"Hold!" interrupted Aesculapius. "You tell us no longer of the past, but of things to come. What is foreseen in 1960? We need now not the historian's critical apparatus, but the insights of prophecy. Turn on the television, Clio, to Channel Delphi and let's hear what message Pythia brings us from Apollo."

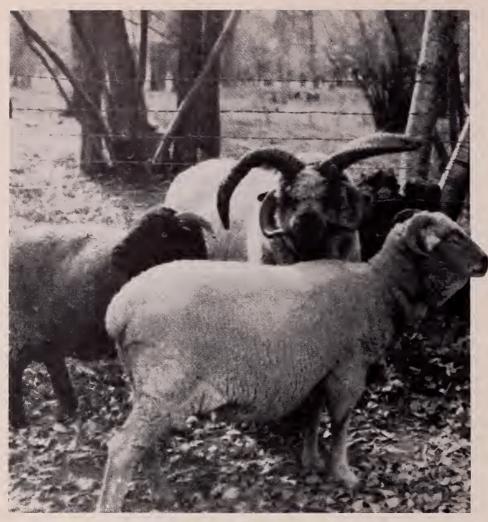
As the image came into focus, the Priestess of the Oracle looked up and began, "Hail to the Powers-That-Be! Their future acts I foretell. Just as they have restored the priestess to the calling of Aesculapius to work beside his priests — yea, and soon shall find her a place to dwell within the confines of the sacred shrine on Avenue Louis Pasteur, so soon shall they revive the honor done to those ancient tongues that sired our speech — to Latin, that sacrum of language, and to Greek, which 'is like lace; every man gets as much of it as he can.' A humble start at first — a mere allusion to their worth in the simple phrase 'competence in a foreign language, either modern or classical.' But I foresee the relentless turning of the wheel of time; I foresee that day when once again the medical aspirant will be required to prove his mettle in Latin 'on the Monday preceding the last Wednesday in June or September, at 10 A.M.'" Then lapsing into hexameters, the Oracle continued:

"Under the frills of ephemeral fashion solid the hem shows Sewn on the slip of Eternity: Plus ça change, plus c'est la même chose."

"I know that!" eagerly interrupted the student with the competence in French. "That means: 'Stay out of the Deanery when the girls are changing their clothes!'"

J.C.N.

October, 1960 27



Pet
Pourri

These longhorn sheep belong to James A. Greene, '25, Houston, Texas

J. Beach Hazard, '30, Gates Mills, Ohio, with poodles, "against a backdrop of real corn."



Clip Joint: Carl Walter, '32, Boston, Mass.





iah Eisaman, '21 — the one with the hat. 'ou can say anything you wish about me, nothing derogatory about my mule.")



Theodore Brown, '30, with his horses. West Newton, Mass.

Evan Calkins, '45, with (left to right) Amy, Daisy and Eeyore — Weston, Mass. ("They're donkeys, not burros!")



BEETHOVEN'S DEAFNESS

Clarence E. Zimmerman. '61

AT the age of twenty-eight, Ludwig van Beethoven, already an accomplished concert pianist and composer (his Septet, op. 20, and "Pathetique" Sonata were creating favorable impressions throughout his new home, Vienna), began complaining to his closest friends of an intermittent humming in his ears. This was the insidious onset of a

One of the best-known portraits of Beethoven.

malady whose gradual progress covered the remaining thirty years of Beethoven's life and finally left stone deaf the man many regard as the greatest musical genius the world has ever produced.

The nature of Beethoven's deafness has never been satisfactorily explained. Certainly the physicians of his day were of little help with their prescriptions of herb baths to tone exercises, and they eventually instilled in Beethoven a lasting scorn for all things medical.

What little we do know of its symptomatology is mainly from his own writings. At first, he wrote, the lack of acuity was most noticeable in the higher range of the musical register. In a quiet conversation he would lose the syllables, while yet retaining an awareness of the tones of the words spoken. At the same time, however, he found loud noises intolerably painful and would take every precaution to avoid them. Finally, we are told that a chronic dysentery from which he also suffered seemed connected with his hearing problem, in that each new exacerbation of deafness would be accompanied by colicky abdominal symptoms.

From these meager scraps of information, Beethoven has been diagnosed by various authors as suffering from: otosclerosis, chronic otitis media, and, from oral testimony of two unrecorded prescriptions given him about the time of onset and destroyed by a physician after his death, "chronic syphilis." The last opinion is not widely held today.

Since there was no definitive therapy for organic deafness in the early nineteenth century, a correct diagnosis would not have affected his prognosis. In its influence on Beethoven's life, however, and through its inevitable effect on his music, it has assumed importance for the ages.

We are not without historical precedent in searching for great artists afflicted with defects in the very organs upon which they had relied for their creations. Milton's blindness is an interesting example and a contrast to Beethoven. Loss of sight was wholly alien to Milton's personality and philosophy, and he overcame the handicap only through





unshakable religious conviction. Beethoven, however, presents that peculiar situation where disease and temperament traits exist together in a kind of strange synergism, the former reinforcing developmental trends already present. Affliction and affection become then inextricably interwoven, and the individual's infirmity molds his outlook to such an extent that understanding the man without knowing of his disease is impossible.

BORN in 1770, the third son of Johann Beethoven, Court Tenor to the Elector of Cologne, Beethoven entered by heritage into a world of servility, where the Elector stood in a position only slightly less awesome than God's in the power he wielded over the lives and fortunes of his subjects. However, the century of Werther and romantic individualism was just around the corner, and, perhaps fomented by the relentless efforts of his father to turn him into a musical prodigy to equal Mozart, this sensitive boy grew up with an unyielding mistrust and dislike of all figures of authority, in spite of the fact that he would someday count his most loyal benefactors among the titled.

Beethoven was a moody, impulsive personality, with little inclination or talent for the smoothly polished phrase. In his dealings with others, his behavior was unpredictable; he was capable of the most sweeping generosities and, at the next moment, the pettiest temper tantrums. His few close friends, Wegeler, the Professor of Medicine at Bonn University, Stephan von Breuning, Prince Lichnowsky, and Anton Schindler, his "unpaid private secretary" during the last twelve years of his life, were far from immune from such explosive and trying shifts of behavior. It is to their credit that they were able to perceive and love the noble, aspiring artist behind such a façade, and had the patience to hold fast to him, for Beethoven needed friends dearly, needed their love and admiration far more than their financial support.

Perhaps it is true, as John Burk suggests in his recent biography, The Life and Works of Beethoven, that it was

the composer's inflexible rejection of mediocrity which led to this intermittent truculence and everlasting maladjustment. He demanded of himself ultimate dedication as an artist, and fully expected an unprepared society to follow suit in assisting him.

Slovenly in personal appearance, prone to crude practical jokes (such as bursting into laughter after spilling his food over a hapless waiter), and scornful derision, Beethoven was eminently ill-equipped for matrimony. And yet, his desire for the calmer pleasures and "safe harbor" (his own expression), of domesticity never left him, but rather grew stronger as he grew older and more estranged from his fellows. Although they never came to fruition (a blessing for the distaff side), the composer was intermittently engaged in one infatuation after another, of which the semicoherent note to his anonymous "Immortal Beloved," written in 1812, is our most famous remnant.

HOW fully frustrated was this bull in the china shop of proper aristocratic Vienna is best expressed by Beethoven himself, in a letter written about the age of thirty. It was never mailed and lay undiscovered until after his death; this is the first closely written paragraph:

"You men who think or say that I am malevolent, stubborn, or misanthropic, how greatly do you wrong me, you do not know the secret causes of my seeming so, from childhood my heart and mind were inclined to gentleness and goodwill, I was always eager to accomplish great deeds, but reflect now that I have been in a wretched condition, aggravated by senseless doctors, while year after year I was deceived in my hopes of improvement, and finally faced with the prospects of a lasting malady (whose cure may take years or turn out to be impossible); born with an ardent and lively temperament, even susceptible to the diversions of society, I was compelled early to









keep apart, to live in loneliness; when at times I tried to live this down, O how harshly was I defeated by the doubly tragic experience of my bad hearing, and yet I could not say to people, speak louder, shout, for I am deaf. Ah, how could I possibly admit an infirmity in the one sense which should have been more acute in me than others, a sense which I once possessed in highest perfection, a perfection such as surely few in my profession enjoy or have enjoyed — O I cannot do it, therefore forgive me when you see me draw back when I would gladly mingle with you, my misfortune is doubly painful, for it must lead to my being misunderstood, for me there can be no refreshment from association with my fellows, only the barest needs of communication will be allowed me in society, I must live like an exile, if I come near people a hot terror seizes me, a fear that my condition may be noticed. . . . I almost reached the point of putting an end to my life - only art it was that held me back, ah, it seemed impossible to leave the world until I had brought forth all that I felt called upon to produce, and so I endured this wretched existence. . . . Forced already in my twenty-eighth year to become a philosopher, O, it is not easy, and harder for an artist than another - God, thou lookest into my inmost being, Thou knowest that love of man and desire to do good live in me. O men, when some day you read these words, reflect that you did me wrong, may I in my misfortune be consoled by finding one of my kind who, despite all obstacles of nature yet did all that was in his power to be accepted among worthy artists and men. . . ."

This remarkable document was written from Heiligenstadt, the tiny idyllic village where Beethoven had been ordered to pass the summers to spare his hearing. It heralds much of the composer's later development.

As he grew older and deafer, Beethoven's social contacts grew increasingly painful for him, and as a result they also became less frequent. Externally, it appeared that music had completely engulfed him, and that his fame was spreading. But his circle of friends was shrinking; the omnipresent sycophants that gather about any luminary were there in hordes, but Beethoven was too keen an observer not to single them out and reject them, often abruptly striking the keys of the piano with his closed hands while playing at their gatherings, if their fawning grew too odious.

With deafness, came also suspicion, an easy sequel in the proper sort of mind. What he could not hear he often fabricated. There were interminable squabbles with a long list of servants, accused of robbing or some imaginary breach of etiquette, and fired as fast as they were hired. The outbursts of rage became more frequent; his ability to get along with anyone gradually disintegrated.

The financial dependency of artists upon their patrons was of course anathema to Beethoven. In later life he was prone to accuse his closest friends senselessly, paranoiacally, of mishandling his funds. And his fiscal policies with his publishers were almost ridiculous. He promised his long awaited "Missa Solemnis" simultaneously to several publishers for a fixed sum. At the height of his fame, he was pleading bankruptcy to his patrons, while he had secretly stowed away the equal of \$15,000 for his nephew and ward, Karl. His pathetic attempts at being a parent to his nephew were disastrous and disillusioning, and their relationship was a comi-tragic succession of errors and heartbreak for both the nephew and aging man.

SO beset was Beethoven with the incubus of failing health, financial burdens, and disappointment in his ward that we might say we have the makings of a sociopath. But if we do, we forget the crucial factor: the composer.

Let us turn back to Milton for a moment; a poet blind, if he ever saw, can after all recall with some clarity images of things seen, and easily reshape them into images of things imagined. The visual memory presents us with a



picture, with elements in proper relationship. But while music, both in its harmonic and contrapuntal elements, also stresses relationships of notes, the auditory powers of recall tend to be more linear, that is we remember melody rather than chords. An individual with perfect pitch can hear in his mind, therefore, the way a written melody might sound, but to grasp simultaneously the evanescent harmonies created by many voices is more difficult. Imagine, then, the task of attempting to predict the sound of a full orchestral score without recourse to a single sound, when the myriad qualities of the separate instruments themselves complicate our original problem.

Fortunately for Beethoven, there were several elements in his favor. First, he had a marvelous imagination and sense of pitch; second, he had a vast experience in orchestration and in the successful (and unsuccessful) blending of instruments to produce desired effects; finally, music itself, tonal music at any rate, is based on certain mathematical rules of note relationships, worked out largely by the sixteenth century polyphonists and certain fundamental laws of harmonic progression extensively elucidated by Rameau late in the eighteenth century; of these, Beethoven had full working knowledge, and while he bent them to suit his needs for expression, he never abandoned them, even after deafness had closed his ears. In fact, we might have expected Beethoven, moving in the new silence of his musical environment, to develop more fully this latter "geometrical" aspect of music, the abstract purity of counterpoint of which Bach was such a master, and whom Beethoven admired greatly.

To a certain extent only was this true. In figure 1 are some bars from the *Grosse Fuge* in B flat Major, opus 133, written several years after the composer had heard anything. Note how widely spaced the writing is, how Beethoven, in his relentless pursuit of the fugal idea, strains his first violin in the high register, and abandons rhythmic subtility. This is brutal, driving music, and displays the characteristics we might expect from a deaf composer: It "reads" better than it sounds. Several such instances

might be found among Beethoven's later works.

But fortunately, these instances are the exception rather than the rule. The technical development of Beethoven's last quartets far surpassed anything previously written, but in them we are more likely to find the composer abandoning strict form for the *musical idea* and thematic material, rather than the reverse. These are quartets which fairly burst with sheer loveliness of inspired sound and turns of harmony never before attempted nor since followed (except possibly in this century by Bartok).

From what resources Beethoven found this wealth of beauty, or how one engulfed in silence could conceive it, we cannot even surmise; suffice it to say the music is there. As just one instance, the limpid yet mystic loveliness of the opening bars of the modal adagio movement from the Quartet in A Minor, op. 132, is apparent almost at a glance (figure 2).

While Beethoven's external world became more chaotic, he gained a surer footing in his inner existence, the world of music; here was a universe in which he could order the elements into new forms with a groping but aspiring mind. In musical forms he seldom found disappointment, and if he himself sometimes fell short of his own ideal in attaining perfection of expression, he was sure enough of his inner life to say: "He who truly understands my music must thereby go free of all the misery which others bear about with them"; or again, "When I compose, I am never alone."

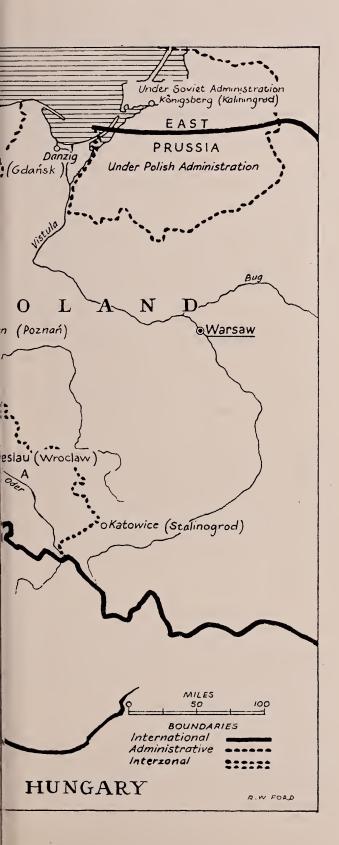
Seen in this light, the loss of hearing actually may have helped Beethoven along his lonely, steep path as artist, towards the peace of fulfillment which seems to be reflected in the static chords of this second example. Beethoven was never like Mozart; composition did not come easily to him. Working in the loneliness imposed both by inclination and disease, Beethoven arrived at this final pinnacle of beautiful sound and musical form that staggers the imagination; an inner world, an inner ear that deafness only made more secure, more unfathomable, to those outside it.

October, 1960 33

MEDICAL LIFE IN THE SOVIET



ZONE OF GERMANY



MEDICAL care and medical education in the Soviet Zone of Germany have been founded and developed upon the model of the Soviet Union since the end of World War II. Since 1945, the tradition of independence in academic medical institutions has been gradually suspended and these institutions placed under the aegis of Communist health officials who are given exclusive power to authorize public meetings. In contrast to earlier practice, doctors are not allowed to take part in scientific conferences abroad without permission (West Germany is included in the countries listed as "abroad"). Approved representatives are assembled in delegations and accompanied by political watchdogs who are members of the Socialist Einheitspartei.

Scientific research is, of course, directed and financed by the government. Generous subsidies are allocated to those projects to which the government gives priority. Research investigation in general suffers from lack of technical equipment, chemicals and, especially, the absence of close contact with the West.

Until 1945, the successful completion of the *Abitur* examination in a German Gymnasium (equivalent to high school plus two years of college in the United States) was requisite for entrance into any university. This situation has changed in the Soviet Zone. The right to matriculate has been made dependent upon political considerations and upon social origin with the aim of eliminating bourgeois elements with maximum expediency. The latest entrance requirements, dated March 10, 1960,* stated explicitly that "applicants will be admitted who have been energetically engaged in the furtherance of Socialism" (Communism). The portion of workers, peasants and their children shall average 60% of the total in all branches of study.

First priority goes to the following categories:

- a) applicants who have worked successfully for several years in the socialist administration or in state and controlled agencies and institutions and therefore have been elected for study by their employer.
- b) applicants who have performed honorable service in the armed services and are recommended for study by their unit.

^{*&#}x27;Hochschulwesen' Heft 5/1960 des Staatssekretariats für das Hoch- und Fachschulwesen der Deutschen Demokratischen Republik.

c) applicants who by law and regulations have been assured special advancement.

None of the applicants of these groups has usually had an education equivalent to the *Abitur*. They are given the opportunity to get additional education at a "workers' and peasants' academy" (these academies are a special Communist institution). Petitions for admission by these students are never submitted directly to the university. They are forwarded to the corresponding firm or military unit for recommendation, and are directed thence to the admissions committee of the university.

For graduates of the secondary schools, a different method of selection is used. At every school, a commission has been appointed under the direction of influential party functionaries who form their recommendations on the basis of political considerations. This commission is empowered to make further studies contingent upon the completion of the above-mentioned "honorable service" (and this is generally the case). Usually, the applicant must also complete one year of work in a production firm or hospital between secondary school and university. Such a period of obligatory work between secondary school and university studies existed already under the Hitler regime. The advertised purpose, then as now, was to 'bridge the gap between the intelligentsia and the working classes,' in other words, to acquaint the professional classes with other walks of life. The more realistic interpretation of such a program is that it is designed to put more workers into the fields and factories, and to increase production.

Candidates who are accepted for further study must sign a declaration which reads as follows:

"I regard my studies as a mark of distinction which is granted to me by the worker and peasant state. In the recognition that the workers spend substantial amounts for my education, I declare myself willing to pledge my whole strength for our people and, after the completion of my studies, to work for three years in a position in the DDR which will correspond to my abilities and my education, and which will be assigned to me by government organs according to political and economic needs."

MEDICAL faculties have been the object of special at-

tention since 1945, not only by the Soviet but also by the German administrative organs, and since they were indispensable for the education of the rising generation of doctors, were favored in the denazification proceedings and also with respect to nourishment and salary. In this manner, and through the guarantee of working privileges in the zone, the regime was able to keep a portion of the intelligentsia. Professors on the scientific and medical faculties are less subject to political pressure (because of the nature of their subject), to slant their teaching, than are the members of the faculties of government, history and literature.

The students must work very hard. They must help out on the Kolchoz farms and in industry and this goes at the expense of the time allotted to their education. During semester holidays, they are obliged to undergo reserve training for four weeks. "Sociopolitical" participation (in Communist jargon) is indispensable if they are to remain on the university books. A course in "The Foundations of Marxism-Leninism" was made a part of the preclinical curriculum and a course in "Foundations of Political Economy" a part of the clinical studies. Also obligatory is a lecture on the teachings of Payloy.

THE suppression of private practice since 1945 has greatly diminished the number of private practitioners and the time is imminent when this last refuge shall be gone. On July 1, 1960, 3,185 physicians remained in the zone, a number which diminishes steadily since it comprises in the main a 60-80-year-old age group. Government planning calls for the complete abolition of private practice after 1965.

The immediate sufferers under this system are the populace. The nationalization of private practice which has been systematically pursued since 1945 was equivalent to the expulsion of physicians. The gaps in the profession which have ensued have not been closed by the public and industrial clinics and outpatient departments built on Russian models.

The majority of the population is dependent upon young, inexperienced doctors in these clinics. As noted earlier, doctors receive preference in salaries, and this encourages the young graduate to begin practice immediately in the clinics and outpatient departments, rather than completing his year of internship. Misdiagnoses occur frequently and have undermined the confidence of the populace in the clinics.

The waiting rooms of those doctors who remain in private practice are overcrowded. Hour-long waiting is the accepted course, since it is only here that doctor-patient consultation still exists. The need for doctors in the zone can hardly be imagined. Especially marked is the shortage of specialists.

Hospitals are constantly overcrowded. Referrals must frequently wait for admission. Only when life is in danger, or by urgent intervention of the attending doctor, is rapid admission possible. At the same time, the number of ill in the zone is high. Germany has traditionally been advanced among European countries in respect to social welfare. Bismarck was one of the first to promulgate social legislation in the last decades of the eighteen hundreds. (In so doing, he was able to take the initiative away from the German Socialist Party of that time.) In comparison with the United States, social security programs in both East and West Germany are quite comprehensive and resemble each other in many respects. The social insurance system in East Germany, however, has since 1945 come under the aegis of the Free German Trade Union, the executive organ of the Socialist Einheitspartei. The aim of the Union, as manager of the East German health insurance plan, is to lower the prevalence of disease and to increase labor productivity. Associated in this program are the "Commissary Medical Directive Centers," directed, not by physicians, but by political functionaries. Those who have been ill several times within one year appear before these Directive Centers. The task of the centers is to eliminate Arbeitsunfähigkeit, which is a legal term denoting recognition of inability to work.

THIS has been a short perspective, and some details may have been neglected. In summing up, it should be stressed that everything connected with medicine in East Germany receives preferential treatment. For the time being, also, due to the tremendous lack in well trained medical personnel, the East German Government must rely upon the collaboration of medical people with a bourgeois background. They are therefore forced to grant the universities a certain amount of free speech and privileges. After fifteen years, however, a generation has now grown up under the Soviet system and is ready to begin work.

THIS article is based on the knowledge of several German physicians acquainted with East and West Germany. It is the third in a series on East German medicine.

THE Bulletin thanks especially Dr. Charlotte Heyden of West Berlin.

Dr. Kennedy

NEW BIOCHEMISTRY HEAD

Dr. Eugene P. Kennedy is the new Hamilton Kuhn Professor of Biological Chemistry and Head of the Department of Biological Chemistry. Formerly Professor of Biological Chemistry at the University of Chicago, he recently returned from England where he was on leave at Oxford University as a Senior Postdoctoral Fellow of the National Science Foundation. His research on pathways of fat metabolism in living things has had a great deal of influence on the field of biological chemistry and has inspired related research in laboratories including those at Harvard Medical School.

Born in Chicago in 1919, Dr. Kennedy received the B.S. degree in Chemistry from DePaul University in 1941 and the Ph.D. in biological chemistry from the University of Chicago in 1949. He was associated with

Armour & Company research laboratories in Chicago, from 1941 to 1947, where he worked on blood fractionation techniques under U.S. Navy contract. In 1949 he went to the University of California to work with Dr. H. A. Barker as a postdoctoral fellow of the American Cancer Society. The following year he came to the Massachusetts General Hospital as a research assistant with Dr. Fritz Lipmann, to work on oxidative phosphorylation and the mechanism of action of thyroxine. Since 1951, he has been a member of the faculty at the University of Chicago.

As incumbent of the 51-year-old Chair, Dr. Kennedy succeeds Dr. Albert Baird Hastings, who retired in 1958 to become a member of the Scripps Clinic and Research Foundation at La Jolla, California.

HONORS

The most recent of the eleven new chairs added to the University in the past year is the "Chair in Psychiatry and the sciences basic to it." Fully supported with an endowment of a half million dollars, the Chair has been established in honor of Stanley Cobb, '14. The *emeritus* Bullard Pro-

fessor of Neuropathology, who has been recognized as "a moving force in the development of psychiatry throughout America," taught at the Medical School for 35 years until his retirement in 1954.

A student of neurosurgery (under Dr. Harvey Cushing), neurology and neuropathology prior to his concentration in psychiatry, Dr. Cobb is a symbol of the integration, which the

Chair intends, of psychiatric training with other courses of instruction. Stressing the importance of basic research in the understanding of personality, the professorship plans to make use of the Medical School's extensive facilities: the mental hospitals, the general hospitals (for the study of psychosomatic disorders), and the children's centers (for study of emotional disturbances in the young).

REGIONAL ACTIVITIES

MIAMI

A cocktail party for Alumni attending the meetings of the American Medical Association in Miami was held at the Fontainebleau Hotel on Wednesday, June 15, from 5:30 to

7:30 p.m. The Miami Alumni, headed by Dr. William S. McKibben, '96, were hosts to the visiting Alumni. At this very festive occasion, against a background of accordion music, were some one hundred and fifty guests, representing classes from 1896 to 1959. More than half of these Alumni escorted their wives, whose feminine charm brightened up the otherwise dull gold of the Louis Philippe Room.

As two of our prominent surgeons were leaving the party they were overheard to say, "That was the best darn party the H.M.A.A. ever had." (Or did they say "darn?") We are sorry so many Alumni attending the meetings were unable to join the group. Next year we expect you all at the New York Harvard Club on Wednesday, June 28th for a bigger and better tribute to dear old H.M.S.

BOOK REVIEW

HENRY F. Howe: Massachusetts: There She Is — Behold Her, Harper & Brothers, 1960.

In the Preface to his most recent book, Massachusetts: There She Is -Behold Her, Henry F. Howe, '32, describes himself as a "country doctor." Yet the casual reader chancing upon his work and skipping the Preface might read it through without ever suspecting the primary occupation of its author. So completely has Dr. Howe become engrossed in his second dedication, that in his writing of history no bias whatever of the physician is apparent. He has had, of course, a long experience in his second vocation and has attained essentially professional standing in it. So assiduously, indeed, does he divorce himself from any medical slant, that its very absence becomes almost the only clue to the nature of his primary function in society.

To sketch even in the boldest strokes so complicated a subject as the history of Massachusetts through four and a half centuries from the early European fishermen who began visiting her shores in the fifteen hundreds to the atomic age, in so limited a space as Dr. Howe has had to work in, is a formidable task. Dr. Howe nevertheless has pulled it off with distinction. His tale runs along smoothly from start to finish with commendable continuity and poise. It is interesting and easy reading, with good integration of the basic elements of realistic historical writing.

For this reviewer, for example, Dr. Howe has dispelled completely the popular notion that the history of New England began in 1620. All the forces that set the stage for the Pilgrims and without which they could not have succeeded he identifies clearly. The Prologue of a Theocracy as bigoted and cruel, in its way, as the Spanish Inquisition is followed by rapidly unfolding scenes of Indian wars, development of sea-born commerce, Town Meetings, struggles with Mother England, birth of a new country, growing pains, industrial revolution, and intellectual flowering in the nineteenth century. All these and many more are traced in strong outlines.

Especially vivid is his portrayal of

the maritime history of Massachusetts in which, following in the footsteps of Morison, he is especially learned. His favorite heroes are John Adams and Daniel Webster, but despite the vast literature already available on these men Howe integrates their roles with the rest of his drama so well that there is nothing hackneyed in his use of them.

The readers of the Harvard Medical Alumni Bulletin may wish that since he is a doctor of medicine

(H.M.S. '30), he had given at least a touch of medical history along with the rest but the general reader for whom decidedly this book is written, probably will not notice such omission at all. Let us remember, furthermore, that doctors of medicine are, or should be, also general readers. For any inhabitant of Massachusetts, or anyone outside the State who wishes to get a fair impression of it, Dr. Howe's book is valuable reading.

J. HOWARD MEANS, '11



A portion of John Smith's map of New England. The date of the original map was 1614, but it was amended from later explorers' reports, and this version was published in 1634. Newtowne is now Cambridge; London has been changed to Hingham, Oxford to Marshfield, Poynt Suttliff to Brant Rock, Poynt George to Gurnet.



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October, 1960 41

